TRANSCRIPT OF RECORD

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1932

No. 23

INTERSTATE COMMERCE COMMISSION, PUBLIC UTILITIES COMMISSIONER OF OREGON, ETC., AND PUBLIC UTILITIES COMMISSION OF THE STATE OF IDAHO, APPELLANTS

vs.

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, SOUTHERN PACIFIC COMPANY, GREAT NORTHERN RAILWAY COMPANY, ET AL.

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF OREGON

Filed March 23, 1932

(36634)

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1a [Citation in usual form showing service on Roy F. Shields et al., filed Mar. 18, 1931, omitted in printing.]

2a [Omitted.]

3a [Citation in usual form showing service on C. A. Hart, filed Dec. 14, 1931, omitted in printing.]

4a, 5a [Omitted.]

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7a In United States District Court for the District of Oregon

In equity

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, PETITIONER

vs.

THE UNITED STATES OF AMERICA, DEFENDANT

Petition

Filed May 28, 1930

To the Honorable Judges of the District Court of the United States for the District of Oregon:

Your petitioner, Oregon-Washington Railroad & Navigation Company, an Oregon corporation, files this, its petition, against the United States of America to enjoin, set aside, and annul an order, hereinafter set forth, of the Interstate Commerce Commission (hereinafter called the "Commerce Commission"), a commission existing under and by virtue of the interstate commerce act, and thereupon your petitioner complains and says:

Article I. Residence and status of petitioner

1. That your petitioner is and since November, 1910, has been a corporation organized and existing under the laws of the State of Oregon, owning and operating railroad properties in the States of Oregon, Washington, and Idaho, consisting of main lines extending—

(a) From Portland, Oregon, via Messner and Umatilla to Huntington, Oregon;

(b) From Portland, Oregon, to Spokane, Washington; and

(c) From Portland, Oregon (by trackage owned and leased), to Tacoma and Seattle, Washington.

and of numerous and extensive branch lines of railroad springing from said main line tracks and penetrating into and serving tributary territory, one of which branches, commonly known as the Des Chutes branch, extending southerly from a junction with petitioner's main line on the south bank of the Columbia River in Oregon

8a at a station known as Sherman via the canyon of the Deschutes River to Bend, Oregon, a distance of 147 miles, petitioner has operated and does now operate under a lease from Des Chutes Railroad Company and under a joint user trackage contract from Oregon Trunk Railway.

2. For many years last past petitioner has owned and does now own a line of railroad 155.3 miles in length, extending from a connection with the railroad of Oregon Short Line Railroad Company at Ontario, Oregon, via the Malheur Canyon to Crane, in Harney County, Oregon, and thence across the Harney Valley to Burns.

Oregon. From 1916 to 1924 said line terminated at Crane, 125 miles from Ontario, but in said year 1924 was extended to Burns, which point has since been and is its actual and designated terminus. During all of said times said line has been continuously operated by Oregon Short Line Railroad Company under lease from petitioner.

Article II. Venue—Entry of Commerce Commission order

3. That the Public Service Commission of Oregon (herein referred to as the "Oregon Commission") is now and has been for many years last past a commission created and existing under and by virtue of the laws of the State of Oregon, and charged by the laws of said State with certain duties with respect to the regulation of railroads and public utilities in their operations within the State of Oregon; that said Oregon Commission consists of three commissioners each of whom is a citizen, resident, and inhabitant of the State of Oregon, and that the location, office, and place of business of said Oregon Commission is in the city of Salem in the State of Oregon.

4. That on the 24th day of May, 1927, said Oregon Commission filed its complaint with the said Commerce Commission against the following named railway corporations as defendants therein, to wit:

Central Pacific Railway Company;
Des Chutes Railroad Company;
Great Northern Railway Company;
Northern Pacific Railway Company;
Oregon Electric Railway Company;
Oregon Short Line Railroad Company;
Oregon Trunk Railway;
Oregon-Washington Railroad & Navigation Company;
9a Southern Pacific Company;
Spokane, Portland & Seattle Railway Company;
Union Pacific Railroad Company;

and in and by said complaint said Oregon Commission prayed for an order from said Commerce Commission requiring one or more of said defendants to construct a line of railroad between Crane or Harriman, Oregon, on the east, and Crescent Lake or some adjacent point on the line operated by the Southern Pacific Company, on the west; that said cause before said Commerce Commission was and is known as docket No. 19680, and a copy of said complaint in said cause is hereto attached marked "Exhibit A" and made a part of this petition. That thereafter the defendants in said cause, including this petitioner, filed with said Commerce Commission their answers to said complaint and thereby denied and placed in issue all of the allegations of said complaint except those respecting formal matters, and by affirmative answers presented defenses including the constitutional objections hereinafter mentioned. That said cause was heard before said Commerce Commission and thereafter and on

the 3rd day of December, 1929, said Commerce Commission made and entered its report and order in said cause by the terms of which order this petitioner was and is required to commence on or before July 1, 1930, the construction of 185 miles of railroad (referred to herein as "cross-State line") through central Oregon from a point on petitioner's Ontario-Burns line of railroad to a connection with the Cascade line of Southern Pacific Company at or near Crescent Lake, Oregon, and to complete and place same in operation before July 1, 1933; that thereafter, and on or about the 13th day of December, 1929, said order was served upon petitioner and is the order sought to be enjoined, set aside, and annulled in this proceeding; that said order, together with the said report of the majority of said Commerce Commission and the dissenting reports therein, have been officially published by said Commerce Commission in volume 159, Interstate Commerce Commission Reports, at pages 630, et seq., and a copy of said reports and order are hereto attached marked "Exhibit B" and made a part of this petition. That petitioner will produce upon the hearing of this cause a full transcript of the evidence adduced on the hearing of said cause, docket No. 19680, before said Commerce Commission and prays your honors that the same be considered in support of this petition.

10a Article III. Jurisdiction of court

5. This suit is brought to enjoin, set aside, and annul said order of the Commerce Commission and involves a controversy arising under the Constitution and laws of the United States, and the jurisdiction of this court is invoked under subdivisions 1, 8, and 28 of section 41, and sections 45 to 48, inclusive, of chapter 2 of title 28 of the Code of Laws of the United States of America (44 Stat. L., part 1, pages 866 to 870, inclusive) as amended and supplemented by Supplement III of said Code of Laws of the United States of America (pages 291 and 292).

Article IV. Oregon areas and physical features

6. That the State of Oregon has an area of 96,699 square miles, with a coast line of 278 miles, from which it extends to the east for a distance of approximately 395 miles; substantially parallel with and about 100 miles easterly from said coast line the Cascade Mountains cross said State in an unbroken range from north to south; said mountain range through the State has an average elevation of some 7,000 feet, with certain peaks in excess of 10,000 feet; along the coast line the State is crossed in a general northerly and southerly direction by the Coast Range of mountains, with a maximum altitude of about 4,000 feet: between the Coast Range and Cascade Range of mountains lies the Willamette valley, and in the southwestern section of the State between these mountain ranges are valleys of much more limited areas, known as the Umpqua and the

Rogue. That part of the State west of the summit of the Cascade Range of mountains is known as western Oregon.

7. That part of the State east of the summit of the Cascade Range of mountains is generally known as eastern Oregon and comprises approximately two-thirds of the area of the State. Eastern Oregon in general is a plateau region, with a rolling, broken, and uneven surface in the south half thereof, and a more mountainous contour in the north half thereof; of the more important mountainous elevations in question is a range commencing a few miles east of a point in the Deschutes River canyon where Crooked River joins the Deschutes, and proceeding in a general easterly direction with increasing elevation it forms a spur of the Blue Mountain Range, which proceeds northeasterly from a point some 20 miles north of Burns and thence along the eastern part of Oregon
11a and across its northern boundary; said Blue Mountain Range, in the northeastern part of the State, is followed southerly along the easterly boundary of Oregon by the Burnt River Mountains, the Cedar Mountains, and the Stein's Mountains.

8. That except for limited areas in Malheur County and in the Harney Valley, and very limited areas in southwestern and western Lake County and in the Klamath Basin, which excepted areas are now accessible to and served by existing lines of railroad, and except the timbered areas on the eastern slope of the Cascade Range and in southwestern Lake County (which timbered areas, including those within national forest reserves and Klamath Indian Reservation, contain together approximately 50 billion feet of timber), the southern half of eastern Oregon is almost in its entirety a high desert country, commonly known as the "Great High Desert" and officially described as the "Great Sandy Desert," and same is almost entirely without living water and with no known and practicable available source whereby living water in substantial quantity can be obtained; said desert area comprises many millions of acres in extent and is not adapted or suitable for settlement, reclamation, or cultivation; that the annual rainfall throughout said section is less than 10 inches, and with respect to a substantial part of said area killing frosts obtain in every month of the year; that along the entire route of said proposed railroad and for a distance of 50 miles on either side of it there is no town or settlement except the town of Burns with a population of 200 people.

Article V. Southern Pacific lines and traffic originating thereon

9. That during all the times herein mentioned the Southern Pacific Company was and is a corporation organized and existing under the laws of the State of Kentucky, engaged pursuant to its charter powers in operating railways in the State of Oregon and in other States and among the States of the United States, and having operating offices at Portlend, Oregon, and its principal oper-

ating office at San Francisco, California. That of the lines of railroad operated by it as aforesaid, there have been and are among others:

(a) A main line from Portland, Oregon, via Eugene and Ashland, to Oakland and San Francisco, California, and a second main line known as the "Cascade line" from Portland to Oakland and San Francisco, via Eugene and Klamath Falls;

12a (b) A main line from Oakland, California, via Sacramento, California, to Ogden, Utah;

(c) A main line route from western Oregon via said route (a) connecting with route (b) at Roseville, California, and proceeding thence to Ogden, Utah; and

that physical connection and interchange facilities have during all of said times and do obtain at Portland, Oregon, between said Southern Pacific lines on the one hand and the lines of your petitioner and the Northern Pacific Railway Company, Great Northern Railway Company, and the Spokane, Portland and Seattle Railway Company, respectively, on the other, and between the Southern Pacific Company's line and the line of the Union Pacific Railroad Company at Ogden, Utah, and by means thereof through business has been and is currently interchanged and transported by and between said connecting carriers; that during all of said times said Southern Pacific Company has and does control and operate as a part of its railway system in the State of Oregon numerous and extensive branch and feeder lines of railway connecting with its main lines in said State.

10. Except at and in the immediate vicinity of Portland, in which area competitive conditions obtain between the lines of your petitioner, of the Southern Pacific Company and of the northern lines hereinafter described, and except in Columbia and Clatsop Counties, wherein rail transportation service is afforded by lines of railroad operated by the said northern lines, railroad traffic in western Oregon originates for the most part on the railroad lines of said Southern Pacific Company, and said company is the initial carrier with respect to same, and, with said exceptions, the Southern Pacific Company is for the most part of necessity the delivering carrier as to railroad traffic moving to destinations in western Oregon; that the Oregon lines of said company consist of more than 1,400 miles operated, with a capital investment therein of approximately $150,000,000, and the operations of said Oregon lines for several years last past have resulted in a net return on the investment therein of less than 1 per cent per annum; that upon the trial of said cause before said Commerce Commission the year 1926 was agreed upon by all of the parties to said proceeding as representative of the operations of said Southern Pacific lines in Oregon; that during said year 1926 there were originated on said lines in Oregon 183,478 carloads of traffic, including shipments for both intrastate and interstate movement; of that number 151,876 carloads, or 82.7 per cent of

13a the total, consisted of forest products; 11,555 carloads, or 6.3 per cent, consisted of agricultural products; 3,644 carloads, or 2 per cent, consisted of animals and animal products; 12,096 carloads, or 6.6 per cent, consisted of miscellaneous and manufactured products; and 4,346 carloads, or 2.4 per cent, were products of mines, consisting for the most part of gravel and rock for highway construction; of said total carloads originated as aforesaid 150,180, or 82 per cent of the total, moved locally to destination points on Southern Pacific Company lines or to points on connecting lines in territories that would not be reached by the proposed cross-State line involved herein. That upon said hearing before said Commerce Commission complainant classified as transcontinental all Oregon traffic, both east and west bound, originating with Southern Pacific lines in Oregon or received by said lines, destined to or originating in territory east of the Oregon-Idaho or of the Washington-Idaho State boundary line or beyond the Nevada-Utah boundary line or to the south of the boundary line between New Mexico and Texas; that the total of said transcontinental traffic for said year 1926 via all routes and gateways amounted to 37,386 carloads, or 1,093,485 tons, of which 82.26 per cent consisted of forest products, 8.28 per cent consisted of agricultural products, 7.23 per cent consisted of miscellaneous and manufactured products, 2.18 per cent consisted of the products of mines, and .05 per cent consisted of livestock; of this traffic 33,434 cars (or 89.43 per cent) of the carloads and 1,008,174 tons (or 92.2 per cent of the tonnage) moved eastbound, but only 3,952 cars (or 10.57 per cent) of the carloads and 85,284 tons (or 7.8 per cent of the tonnage) moved westbound; that of said total 37,386 carloads, 5,710 cars originated or were received in Klamath County, and of said Klamath County traffic 5,364 cars originated in the county and moved east, while 346 cars originated in the east and were received in said county, and the balance of said total of 37,386 carloads, or 31,676 cars, originated and were received in western Oregon, divided 27,070 cars originating in western Oregon and moving east and 3,606 cars received in western Oregon from the east; that of the said 27,070 cars originating in western Oregon and moving east, 14,516 cars originated in the counties of Tillamook, Washington, Multnomah, Clackamas, Yamhill, Marion, and Polk, and the distance from the shipping points in said several counties to the common eastern point of Granger, Wyoming, is shorter via the Portland gateway and the line of your petitioner through Huntington, Oregon, than via the proposed cross-State line, with considerations of service, speed, facilities, economy, and efficiency, all favoring
14a said existing route via Portland.

11. That of the railroad mileage operated by said Southern Pacific Company in Oregon, California, and Utah, as aforesaid, a substantial part thereof has been during the times herein referred to and is now owned by the Central Pacific Railway Company, a corporation organized and existing under and by virtue of the laws

of the State of Utah; that said Central Pacific Railroad mileage is and has been during said times under lease to said Southern Pacific Company; that of said Central Pacific owned lines in Oregon there was during and prior to the year 1923 a line extending from a connection with the Southern Pacific Company's railroad at Natron, Oregon, near Eugene, in a southeasterly direction to Oakridge, a distance of 34 miles, and another line extending from a connection with the Southern Pacific operated at Weed, California, in a northerly direction 127 miles to Kirk; that in the years 1923 to 1926 said Central Pacific Railway Company constructed its railroad connecting said two lines between Oakridge and Kirk, and in order to improve said line between Natron and its connection at Weed, California, said company constructed as a part of said main line a railroad from a point 4 miles south of Weed Station in a general northeasterly direction to a point on its said Klamath Falls line near Grass Station, all in Siskiyou County, California, and said line was promptly placed in operation and during all of said times has been and is now operated by said Southern Pacific Company under said lease as aforesaid; that one of the principal inducing causes for the construction of said line of railroad from Natron though Klamath Falls to said point of connection south of Weed was to secure to said Southern Pacific Company for operation between Oregon and California points an alternate main line with lighter grades and less curvature and distance than obtained on the said first main line of the Southern Pacific Company above described, and also to enable said Southern Pacific Company to more efficiently and economically handle and transport through western Oregon traffic with California and with the East through the Ogden interchange with the Union Pacific Railroad Company, and to encompass and enjoy the vast timber resources on the Cascade Range of mountains and on the easterly slope of same; that said Natron-Klamath Falls-Weed line has been commonly known as the "Natron cut-off" and is now more generally designated as the "Cascade line"; that said line crosses the summit of the Cascade Range of mountains through a tunnel at an elevation of 4,840 feet at a short distance from
15a Crescent Lake and as it then proceeds easterly and southerly it skirts the shore of said lake.

12. That pursuant to authority granted to it by the Commerce Commission in May, 1926, said Southern Pacific Company thereupon acquired control of the capital stock of the Nevada-California-Oregon Railway, a corporation owning and operating a narrow-gauge line of railroad from Lakeview, Oregon, to a connection with the Central Pacific Railway Company's line of railroad at Wendel, California, and concurrently with the said acquisition of said control by the Southern Pacific Company the Central Pacific Railway Company obtained authority from the said Commerce Commission to construct and operate a line of railway from a connection with its said Natron cut-off at Klamath Falls to a connection

with said Nevada-California-Oregon Railway line at Alturas in northern California, a distance of 98 miles, and pursuant to said authority received by said Central Pacific Railway Company in May, 1926, it proceeded to and did construct said line of railroad from Klamath Falls to Alturas at a cost of approximately $6,000,000, and in the meantime and prior to the making of the order of the Commerce Commission herein complained of, said Southern Pacific Company reconstructed said line of railroad of said Nevada-California-Oregon Railway and standardized the gauge of same between Lakeview, Oregon, and Wendel, California, and connected said Nevada-California-Oregon Railway with said Klamath Falls-Alturas line of railroad at Alturas at a cost of approximately $2,400,000; that prior to said construction of said Klamath Falls-Alturas railroad line and the reconstruction of said Lakeview-Wendel railroad line and since the year 1913, railroad traffic between points Ogden and east and western Oregon originating at or destined to points on Southern Pacific lines in western Oregon or lines tributary thereto was routed by said Southern Pacific Company through Roseville, California, and the principal consideration inducing said Southern Pacific to cause the construction of said Klamath Falls-Alturas line and the acquisition and reconstruction of the Lakeview-Wendel line was to obtain a more direct, efficient, and economical route for the handling of said transcontinental western Oregon business than the route afforded via Roseville, all of which said Commerce Commission recognized and acted upon in granting authority to said Central Pacific Railway Company and said Southern Pacific Company for the acquisition of said control of said Nevada-California-Oregon Railway and for the construction of said Klamath Falls-Alturas line and the reconstruction of said Nevada-California-Oregon
16a Railway line, and that the route afforded by said Southern Pacific Company for said transcontinental business between western Oregon and points Ogden and east via said Natron cut-off, Klamath Falls, Alturas, Wendel, and Ogden line is a direct and efficient route and is not unreasonably long as compared with the route via the proposed cross-State line between western Oregon points and eastern points, and that shipments moving via said existing route between western Oregon and eastern points move on a schedule as favorable and expeditious as could be afforded by the proposed cross-State line.

13. That prior to the year 1913 the traffic classified herein as transcontinental as aforesaid between Southern Pacific points in western Oregon and eastern points was transported by said Southern Pacific Company and the petitioner and its connections through said Portland gateway, because during said period prior to 1913 the line of petitioner and the said Southern Pacific lines in Oregon were under common control and management, but in the year 1913 petitioner's management ceased to have any control or direction of the operations of said Southern Pacific Lines in Oregon and progressively since that

time said transcontinental traffic has moved under the control and direction of said Southern Pacific Company via Roseville and later via Alturas and Ogden, and thereupon has been diverted from the railroad of your petitioner, with the result that petitioner has lost nearly all of said western Oregon transcontinental business and the volume thereof moving through the Portland gateway is very small; that the policy of the Southern Pacific Company has been, is, and will continue to be to retain the long haul on said traffic to its own rails wherever possible, and with respect to eastbound traffic originating on said Southern Pacific line in western Oregon said Southern Pacific Company has routed and will continue to route said traffic through Alturas as against the Portland gateway, for that its officers and agents occupy the originating territory and control the empty-car supply to shippers, and the western Oregon shippers originating the great bulk in both volume and revenue of said shipments from western Oregon testified in said cause before said Commerce Commission that it was and will continue to be their purpose and determination to continue favoring said Southern Pacific Company with said long haul irrespective of whether said cross-State line is constructed and placed in operation or not; that petitioner will be unable to divert any substantial portion of said western Oregon business to said proposed cross-State line if same is built and placed in operation.

17a

Article VI. Water carriers

14. That for more than ten years last past, a very large volume of the Oregon traffic, and particularly traffic originating in western Oregon and destined thereto, has been moving in increasing volume both to and from Pacific coast points and also to and from Atlantic coast and Gulf points via ships operated to and from Portland in the coastwise trade and via the Panama Canal, and as regards lumber and other forest products this has been and is the condition with respect to business originating at and tributary to Coos Bay, Oregon, and there is no reasonable prospect for the railroads in said territory or any of them to recapture any substantial part of said water-borne business.

Article VII. The northern lines

15. That during all of the times herein mentioned the Great Northern Railway Company was and is a corporation organized under the laws of the State of Minnesota and engaged in the operation as a common carrier of passengers and property by railroad between Mississippi River points at St. Paul and Minneapolis on the east and the ports on Puget Sound, Washington, on the west and intervening territory, and by trackage rights enjoyed by it a line of railroad from Tacoma, Washington, to Portland, Oregon, and from Spokane and Vancouver, Washington, to Bend, Oregon, via Fallbridge, Washington, from which last-mentioned point it operates

over the line of the Oregon Trunk Railway to Bend, and thence in part by its own line and in part by trackage rights acquired from the Central Pacific Railway Company and an interest in an intervening railroad to Klamath Falls, Oregon; that said last-mentioned extension from Bend to Klamath Falls traverses longitudinally the easterly slope of the Cascade Range of mountains until it reaches a point on said Natron cut-off of said Central Pacific-Southern Pacific Railway at a point called Chemult, from which point it operates by trackage rights over said Natron cut-off southerly to Klamath Falls.

16. That the Northern Pacific Railway Company is a corporation organized under the laws of the State of Wisconsin, and is and during all the times herein mentioned has been a common carrier by railroad engaged in the transportation of passengers and property between the Mississippi River at St. Paul and Minneapolis on
18a the east and the ports on Puget Sound on the west, and thence southerly to Portland, Oregon.

17. That during all of said times the Spokane, Portland and Seattle Railway Company has been and is a corporation organized under the laws of the State of Washington as a common carrier by railroad, and engaged in the transportation of passengers and property by its own line between Portland, Oregon, and Spokane, Washington, and between Portland and Astoria in the State of Oregon; that during its entire corporate existence the ownership of its capital stock, except trustees' qualifying shares therein, has been and is vested one-half in said Great Northern Railway Company and one-half in the said Northern Pacific Railway Company.

18. That since about the year 1912 the Oregon Trunk Railway has been and is a corporation organized and existing under and by virtue of the laws of the State of Washington, engaged as a common carrier by railroad of passengers and property from a connection with the railroad of the said Spokane, Portland and Seattle Railway Company at Fallbridge, Washington, via the canyon of the Deschutes River, to Bend, Oregon, a distance of 152 miles; that all of the capital stock of said corporation, except qualifying shares held by its board of trustees, is owned by said Spokane, Portland and Seattle Railway Company.

19. That the operations of said Great Northern Railway Company from Vancouver and from Spokane via Fallbridge and Bend to Klamath Falls commenced about the month of May in the year 1928.

20. That during all the times herein mentioned the Oregon Electric Railway has been and is a corporation organized and existing under and by virtue of the laws of the State of Oregon, engaged as a common carrier by railroad of passengers and property between Portland and Eugene in said State, with certain branch lines extending from said main line into tributary territory; but that all of its capital stock, except qualifying shares held by members of its board of directors, has been and is owned by said Spokane, Portland and Seattle Railway Company.

21. That each and all of said corporations classified herein under said heading "The northern lines" have such physical connections with each other that they carry on and conduct interstate commerce by railroad between said points in Oregon and points in other States of the United States and in foreign countries under through routes and joint rates, fares, and charges duly established, published,
19a and filed with said Interstate Commerce Commission and each and all of said railroad companies during all of said times have been and are subject to the said interstate commerce act.

Article VIII. The Des Chutes lines

22. That of the railroad mileage in the Deschutes River Canyon between the mouth of the Deschutes River and Bend, Oregon, the Oregon Trunk Railway operates by trackage rights from the Des Chutes Railroad Company between South Junction and Metolius, a distance of 24.3 miles, and your petitioner, by virtue of trackage rights from the Oregon Trunk Railway, operates over the tracks of the latter between North Junction and South Junction, a distance of 10.4 miles, and between Metolius and Bend, a distance of 41.3 miles; that the cost to the Oregon Trunk Railway of said railroad to Bend and its investment therein exceeds the sum of $15,000,000, and the cost to the Des Chutes Railroad Company of its said railroad line (95.3 miles) and its investment therein was and is $6,477,129.

23. That said two lines of railway serve the country on either side of said Deschutes River in the counties of Deschutes, Crook, Jefferson, Wasco, Wheeler, and Sherman; that the traffic forwarded from said lines greatly exceeds the traffic received thereon, and the traffic moving local to said lines has been and is almost negligible; that lumber manufactured and originating at Bend, where two large modern saw mills produce about 8,000 carloads of pine lumber per year, constitutes by far the largest traffic enjoyed by said lines; that moderately substantial shipments of wheat, hay, and livestock are received and transported over the same from said territory tributary to them; that said lines have been operated for eighteen years last past and said operations have been and are consistently attended with large operating deficits each year and afford no return to the owners of said lines upon their investment therein; that the principal towns and cities tributary to said Des Chutes lines and the population thereof, according to the Federal census of 1920, have been and are Bend, population 5,415, Redmond, population 585, Madras, population 337, and Prineville, population 1,144.

Article IX. Oregon, California & Eastern Railway

24. That the Oregon, California & Eastern Railway Company is and for more than ten years last past has been a corporation
20a organized under and by virtue of the laws of the State of Nevada as a common carrier by railroad of freight and pas-

sengers for hire, subject to the interstate commerce act, with its operating office at Klamath Falls, Oregon; that the property owned and operated by it consists of a line of railroad extending some 40 miles, more or less, from Klamath Falls easterly and northeasterly to Sprague River in said Klamath County, with an extension projected some 63 miles from its present terminus to Silver Lake in Lake County, Oregon, and with branch lines projected therefrom as follows:

(a) From a point on the proposed Silver Lake extension approximately 20 miles north of Sprague River northwesterly along the Williamson River approximately fifteen miles in Klamath County, Oregon; and

(b) From Sprague River southeasterly approximately 65 miles to Lakeview.

25. That said line, to the extent it has been constructed and operated, is and will be largely devoted to the transportation of logs from the timbered areas reached and traversed by said lines to Klamath Falls for manufacture into lumber, and also to afford transportation to saw mill operations to the extent such become established and accessible to said railroad, and to afford rail transportation service between Klamath Falls and Lakeview; that the purpose of said railroad has been and is to serve said timbered areas and that the same as projected passes through forested areas, and the extension to Silver Lake proceeds through a timbered tract and terminates in an open country utilizable for pasturage; that the operations of said railroad have not been profitable and can not be profitable in and of themselves as a separately operated property.

26. That upon application by said Oregon, California & Eastern Railway Company, the Commerce Commission in May, 1926, authorized the said construction applied for by said railway company as aforesaid, but conditioned same upon the granting by said Oregon, California & Eastern Railway Company to the said Oregon Trunk Railway Company of the right to operate over the railroad of said Oregon, California & Eastern Railway Company, but thereafter by authority of the Commerce Commission granted in January, 1928, joint control of said Oregon, California & Eastern Railway Company was acquired by the said Southern Pacific Company and the said Great Northern Railway Company by purchase of the capital stock of said Oregon, California & Eastern Railway Company, and said joint control of said property has been ever since and now is enjoyed by said purchasing railway companies.

21a Article X. Railroads comprising Union Pacific system

27. That the Union Pacific Railroad Company, Oregon Short Line Railroad Company, Oregon-Washington Railroad & Navigation Company, and Los Angeles & Salt Lake Railroad Company were during the times herein mentioned and are now separate corpora-

tions, and each of them operates as a common carrier by railroad subject to the provisions of the interstate commerce act (under and pursuant to which each of them reports to the said Commerce Commission as required by law), with principal operating offices respectively located as follows:

Union Pacific Railroad Company, Omaha, Nebraska;

Oregon Short Line Railroad Company, Salt Lake City, Utah;

Los Angeles & Salt Lake Railroad Company, Los Angeles, California;

Oregon-Washington Railroad & Navigation Company, Portland, Oregon;

but the said four companies together constitute and are commonly known as the Union Pacific system, and that said railroads comprising said system are under one common control and management, and are operated as a single system.

28. That the railroads owned and operated by said respective companies comprising said Union Pacific system have been constructed, developed, and built up at great expense to a high physical standard; that traffic originating on any of them or received by any of them is transported and interchanged from one unit to another as destination requires at the following principal points of interchange:

(a) Between the Oregon-Washington Railroad & Navigation Company and the Oregon Short Line Railroad Company at Huntington, Oregon;

(b) Between the Oregon Short Line Railroad Company and the Union Pacific Railroad Company at Green River, Wyoming;

(c) Between the Oregon Short Line Railroad Company and the Los Angeles & Salt Lake Railroad Company at Salt Lake City, Utah; and

(d) Between the Union Pacific Railroad Company and Oregon Short Line Railroad Company at Ogden, Utah.

29. That the principal main line of the Union Pacific Railroad Company consists of a double-track railroad extending from Council Bluffs, Iowa, to Ogden, Utah; that it has not owned during any of the times herein mentioned nor does it now own any rail-
22a road within the State of Oregon; that during all the times herein mentioned the principal main line of railroad of the Los Angeles & Salt Lake Railroad Company has extended and does now extend from Salt Lake City, Utah, to Los Angeles, California; that the principal main lines of railroad of the Oregon Short Line Railroad Company extends (a) from a connection with the railroad of the Union Pacific Railroad Company at Granger, Wyoming, to a connection with the railroad of your petitioner at Huntington, Oregon, and (b) from a connection with said first main line at McCammon, Idaho, through Ogden to Salt Lake City, Utah; that said three railroad companies during all the times herein mentioned have been and are corporations organized and existing under and by virtue of the laws of the State of Utah; that the railroad mileage of

your petitioner referred to in paragraph 1 of this petition as owned and operated by petitioner consists of a total mileage of 2,365 miles and same represents a cost to your petitioner and an investment therein by it substantially in excess of $173,000,000; that during all the years of its operation said railroad property of said petitioner has been efficiently and economically operated and maintained by petitioner, but since its loss of the bulk of the western Oregon business, as alleged in paragraph 4 of this petition, it has received insufficient business to enable it to operate profitably to the extent of a reasonable return upon its investment in said properties, and its said operations during the past ten years have resulted in substantial losses year by year, with the result that it is now burdened with a corporate deficit in excess of $6,000,000; that it has been and is in excellent physical condition and adequately and efficiently equipped, with adequate capacity to normally and efficiently receive, handle, and transport during said years and at the present time four times the volume of traffic that it has had, now has, or has presently in prospect; that its principal interchange of east and west bound traffic is made with the Oregon Short Line Railroad Company at Huntington, Oregon, and that the movement of said traffic has for years preponderated and does now preponderate heavily eastbound.

30. That each and all of said corporations classified herein under said heading "Railroads comprising Union Pacific system" carry on and conduct interstate commerce by railroad between points in the States in which they operate and points in other States of the United States; that the route and service afforded by said Union Pacific system lines between points in eastern and southeastern Oregon and southern and southwestern Idaho on the one hand,
23a and Los Angeles and tributary territory via Salt Lake has been and is the most direct and efficient route existing, and same is shorter in distance and in all respects more efficient than will be the route between said points proposed via the cross-State line.

Article XI. Ontario-Burns line

31. In the year 1905 the interests by which the properties comprising the then so-called Union Pacific system and Southern Pacific lines were then controlled, caused to be incorporated and organized under the laws of Oregon the "Oregon Eastern Railway Company," for the dual purpose of obtaining a more direct and efficient line between San Francisco, California, and Portland, Oregon, and to move accessible western Oregon traffic, and particularly lumber traffic, for the East then moving by railroad, across central Oregon; that said company was empowered by its articles of incorporation to construct, maintain, and operate a line of railroad from Natron, near Eugene, Oregon, to Ontario, Oregon, with a line springing therefrom and proceeding south to Klamath Falls, Oregon, which by amendment was extended to Weed, California. Construction on

said lines was prosecuted with some interruption south from Natron, north from Klamath Falls, and west from Vale, Oregon (that portion of the routes from Weed to Klamath Falls and from Ontario to Vale having been previously constructed), when in November, 1910, petitioner herein having been incorporated, the partially constructed Natron cut-off line from Weed via Klamath Falls and Odell to Natron were conveyed to Central Pacific Railway Company and the remainder thereof from Ontario westerly were conveyed to petitioner. Thereafter and in December, 1912, by decision of the Supreme Court of the United States, the said Union Pacific Railway Company was required to and did pursuant thereto divest itself of the control of the Southern Pacific Company; that by reason of the control of the Central Pacific Railway Company by the Southern Pacific Company, access by petitioner via said Oregon eastern route to western Oregon traffic and to its terminal at Portland was cut off and no substantial traffic was left or available for the remaining part of said route from Odell to Vale. That petitioner thereupon completed its said line west from Ontario to Riverside, a distance of 93 miles, in 1913, and later, and in 1916 extended same to the terminus at Crane in the Harney Valley, 127 miles from Ontario, and in 1924 changed the route to the north and west and extended
24a the line through the Harney Valley to Burns, which point was and is in fact and by petitioner's articles of incorporation as amended, the western terminus of said line. Said Ontario-Burns line was acquired and constructed by petition at a cost in excess of $7,000,000, and same prior to said extension to Burns and since has been economically and efficiently operated, but during all the years of its operation the operating expenses thereof and the taxes thereon have exceeded the total operating revenues from same by more than $200,000 annually, with a maximum gross operating revenue for any one year of less than $210,000, and no substantial shipments have been made via said line to California destinations.

Article XII. Oregon & Northwestern Railroad

32. That during the years 1925 and 1926 a line of railroad was constructed from Burns, Oregon, in a general northerly direction for a distance of 50 miles to Seneca; that said railroad so constructed was chartered as a common carrier, and in the month of October, 1928, was acquired by Edward Hines Western Pine Company, and later and on the 12th day of June, 1929, said company received authority from the Commerce Commission to operate said Burns-Seneca line of railroad as such common carrier in interstate commerce under the name of Oregon & Northwestern Railroad, and that said railroad has been and is so operated, and while its primary purpose and business consists in the hauling of logs from the forested area in the mountains north of Burns and delivering same at Burns, it handles and transports as a common carrier such other traffic as is offered,

and by physical connection between it and your petitioner's railroad at Burns, any through business obtaining has been and is interchanged and transported by said connecting carriers.

Article XIII. Rogerson-Wells line

33. To enable the producers and shippers in southern Idaho and southeastern Oregon producing areas to more conveniently market their surplus products in the San Francisco Bay district in California, and at the urgent request of Idaho officials and shippers, said Oregon Short Line Railroad Company constructed a line of railroad from the terminus of its so-called Twin Falls branch at Rogerson, Idaho, to a connection with said Southern Pacific operated line at Wells, Nevada, a distance of 94 miles, at a cost of $3,435,000, opened the same for operation in February, 1926, interchange con-
25a nections having been made between the same and the railroads of the Southern Pacific Company and Western Pacific Railroad Company at Wells, Nevada; that said line has been continuously operated as a part of a through route between points on said railroad of the Oregon Short Line Railroad Company and its connections and points on said railroads of the Southern Pacific Company and Western Pacific Railroad Company and their connections, respectively, but after four years of operation very little use of same has as yet been made by shippers in said southern Idaho or southeastern Oregon territory or elsewhere; that said route is a more efficient route between points in southern Idaho and southeastern Oregon on the one hand and San Francisco bay points and tributary territory on the other than will or can be afforded by said proposed cross-State line, and same is not unreasonably long as compared with the route that would be afforded by the construction and operation of the proposed cross-State line, and while said Rogerson-Wells line was well constructed and has been efficiently and economically maintained and operated, said operations have failed to return an amount sufficient to pay current operating expenses and taxes but have resulted in an annual loss of more than $40,000 per annum from the beginning of operation thereof; that said line is an extension south from a line traversing and serving the extensive and productive irrigated land areas in the Twin Falls, Minidoka, Burley, and Hillsdale districts in south central Idaho and much heavier traffic is immediately tributary to said extension than will be tributary to the said proposed cross-State line in Oregon.

Article XIV. Map showing territory involved and existing railroads and proposed cross-State line

34. Attached hereto and made a part hereof as Exhibit C is a map illustrative of the territory involved in said proceeding before said Commerce Commission and mentioned herein, and showing the location of the railroad lines herein discussed, including the

proposed cross-State line called for by the order of the Commerce Commission herein complained of.

Article XV. Consideration of established facts refused by commission

35. That all and singular the facts hereinbefore in paragraphs numbered 6 to 33, inclusive, appeared upon the hearing of
26a said matter so brought and pending before said Commerce Commission and the evidence establishing same was before said commission upon the presentation and submission of said cause to said commission for its consideration thereof as aforesaid, and there was no testimony given or circumstance established from which an inference, presumption, or conclusion contrary thereto could or can lawfully be drawn or established (except that at the time of said hearing in 1928 it appeared that construction of the railroad between Klamath Falls and Alturas and the reconstruction of the line between Lakeview and Wendel was in progress, but the completion and placing of said lines in operation was duly reported to said Commerce Commission before the argument of said cause before said commission, and except that certain witnesses expressed as their opinion that some shippers in western Oregon and in Southeastern Oregon and southwestern Idaho would divert, route, and receive some freight via the proposed cross-State line if same were built and operated). In addition to the said facts as hereinbefore alleged, the evidence adduced upon the hearing of said cause and contained in the record thereof before said commission further established and demonstrates without dispute, among other facts, that:

(a) The proposed line is not and will not be justified if the Southern Pacific Company can not be required to interchange the traffic originated by it in western Oregon with this petitioner at the proposed junction, Crescent Lake; the purpose of the complainant in its said proceeding, docket No. 19680, was and is to compel said interchange to be so made at Crescent Lake instead of with the Union Pacific Railroad Company at Ogden; the western Oregon shippers for the most part will not route their traffic via the proposed cross-State line if it is built, and the Southern Pacific Company will not voluntarily make the proposed interchange at Crescent Lake; the Great Northern Railway Company will not voluntarily interchange its Klamath Falls or Bend business with said proposed line.

(b) The construction of the line in question is not sought or required to meet any existing demand, necessity, or convenience in the nature of better or additional transportation routes or facilities for the movement of any substantial amount of existing or presently available traffic, nor to require petitioner to provide itself with safe or adequate facilities for performing as a common carrier its car service as that term is used in the interstate commerce act, but on

the contrary complainant asserted and urged in presenting
27a said cause that in prosecuting same it planned for the future time if and when a greater demand comes for lumber from Oregon and when the lumber of the Southern and Eastern States is practically exhausted.

(c) The asserted and admitted purpose of complainant in said proceeding, docket No. 19680, was and is to obtain competitive railroad construction and service in western Oregon, and by obtaining said order of the Commerce Commission requiring said proposed construction to Crescent Lake so involve petitioner that it will be compelled to make further construction over and across the Cascade Mountains and into and through the timbered areas of western Oregon and over and across the Coast Range of mountains to the Pacific coast.

(d) The territory traversed by the proposed line and accessible thereto is incapable of producing traffic in sufficient volume to substantially contribute to its support or to justify its construction; the State of Oregon has expended in excess of $100,000,000 in the construction of a State highway system during the past few years, but no construction has been made in the areas local to or traversed by said proposed railroad and the construction of any first-class highway in Harney County is not contemplated.

(e) The products of the ten southwestern counties in Idaho and of the producing areas of Malheur County, Oregon, are and will continue to be similar in character to those raised and produced in western Oregon and in the State of Washington and to find market in San Francisco Bay communities must compete with said products of western Oregon and Washington, and if said proposed line is built, Washington and western Oregon producers will continue for the most part to enjoy a shorter distance to said San Francisco Bay market than obtains from southwestern Idaho and Malheur County points of origin, and lesser rates of transportation will continue to obtain in favor of said Washington and western Oregon shippers for that a larger bulk of said shipments can and does move and will continue to move by water from coast ports to said California destinations; western Oregon is sparsely settled, and, while producing to a small percentage of its capacity, said production is greatly in excess of local demand or ability to consume, and it is and will be indefinitely unable to consume or afford a market for any substantial volume of the products of southern Idaho except
28a for the city of Portland, which is the only large city or large commercial and industrial center in Oregon; intervening between the producing areas of southwestern Idaho and Malheur County, Oregon, and competitive therewith in San Francisco Bay markets are producing areas in Nevada, in the southern part of Lake and Klamath Counties in Oregon, and in central and northern California, and the consuming capacity of said San Francisco Bay markets to absorb the products of said competitive areas was not established; production in excess of market demand has and does

obtain as a general rule in the intermountain and adjoining Pacific Coast States with respect to the products of their lands; but Los Angeles and the districts immediately tributary thereto afford the largest and best existing and potential California markets for the products from the lands of the southern Idaho territory, including the ten southwestern counties of said State and the county of Malheur in Oregon.

(f) The lumber industry in Oregon, Washington, and Idaho, and in the western and Pacific coast country in general is and has been for many years last past in a depressed condition, and while the mills in the States and territory in question have been and are operating as a rule substantially below their capacities, their outputs largely exceed market demand therefor, and said operations are not as a rule, nor have they been for several years last past, profitable to said mill owners or operators, and if said proposed cross-State line should be constructed and thereby stimulate the production of lumber in said States or any of them the industry would thereby be greatly harmed, to the detriment of said States and of Oregon in particular. The bulk of timbered areas in eastern Oregon which are not reached or served by existing railroads are owned by the United States of America and are within the boundaries of national forests; that all of said national forests are administered for the United States by the United States Forestry Department under the direction of the Secretary of Agriculture of the United States, and the policy of said department has been for years, is now, and will be for many years in the future to conserve said stands of timber, and if and when cutting therefrom is permitted to limit the amount of the annual cut to a volume that will not exceed in amount the current growth in such forests.

(g) The expense upon petitioner involved in said alleged extension ordered constructed by said Commerce Commission as afore-
29a said would greatly impair the ability of petitioner to perform its duty to the public.

(h) The case of complainants before the commission and the report and order of the Commerce Commission with respect thereto contemplates and is limited to a railroad of branch-line quality of construction and the operation of mixed train service upon and over the same; the main lines of the petitioner, the Oregon Short Line Railroad Company, the Los Angeles & Salt Lake Railroad Company, the Southern Pacific Company, and Central Pacific Railroad Company have been built up at great expense and maintained to high standards of quality, efficiency, and safety in respect of roadbed, tracks, structures, facilities, and appurtenances whereby traffic is and can be transported via Portland and Huntington, via Alturas, via Wells, and via Ogden and Salt Lake, with very much greater frequency, speed, and efficiency than via the proposed cross-State line in connection with the Ontario-Burns line of your petitioner; the last-mentioned line extending from Ontario to Burns 151 miles is

not comparable with said main lines in construction or suitable for main-line business; two and one-half to three days' time would be required to move a shipment of livestock to Portland from Ontario via the proposed cross-State line, but such shipment under existing schedules would, if routed via Huntington and the present main line of petitioner, reach Portland within thirty-six hours.

(i) The tonnage movement on petitioner's said railroad has preponderated for years and does preponderate heavily eastbound and a diversion of westbound southern Idaho and/or southeastern Oregon traffic to the proposed cross-State line would aggravate the already unbalanced traffic interchange at Huntington and be attended with serious embarrassment and expense to petitioner's operations.

(j) Boise is located in the western part of southwestern Idaho on the main line of the Oregon Short Line Railroad Company and the distance therefrom via the proposed cross-State line and Southern Pacific Railway from the proposed junction at Crescent Lake to San Francisco would be 911 miles, more than one-third of which would be branch-line construction and operation, while the distance from Boise to San Francisco via Wells, Nevada, and the Southern Pacific is 968 miles, of which 785 miles is high-standard main line with a substantial part thereof double track and the remaining 183 a branch line of good construction; the distance from Boise to Los Angeles via Oregon Short Line Railroad Company and
30a Los Angeles & Salt Lake Railroad Company (Union Pacific system) is 1,204 miles, all main-line track, while via the proposed cross-State line and Southern Pacific Company the distance would be 1,375 miles, of which 320 miles would be of branch-line construction.

(k) At Crescent Lake for a considerable period during the winter the snow reaches a depth of ten feet and the temperature is down to zero and below, presenting an unfavorable situation for interchange of traffic and a much worse condition than exists on the line of your petitioner.

(l) No person or corporation owning, controlling, or interested in property along the entire 185 miles of proposed railroad construction represented or testified upon the hearing of the existence of any substantial business or traffic local to the proposed line available for or requiring transportation; while no irrigation projects are located immediately accessible to the proposed line, those situated remote from but in nearest proximity thereto were and are so hopelessly involved under excessive bonded debt that neither the governor nor other State officials having jurisdiction of same would advise any prospective settler to acquire or settle upon same until existing financial embarrassments of said irrigation districts are favorably adjusted.

(m) The efficiency of one line of railroad as compared with another for the performance of a required service is not determined

alone by the distance traversed, and while the route from western Oregon points to the common point of Granger, Wyoming, is somewhat greater via Alturas than via the proposed cross-State line, yet the route via Alturas to Granger affords 108 more miles of double track than the route via the proposed cross-State line, and the traffic and operating conditions are such that as fast a schedule can be maintained between western Oregon and Chicago via the Alturas route as via the cross-State line; the distance between the common point of Ontario, Oregon, and Portland is 430 miles over the present route via Oregon Short Line Railroad Company and petitioner's line as compared with 536 miles via the proposed cross-State line and Southern Pacific lines.

(n) The movement of sheep from eastern Oregon and southern Idaho heavily preponderates to eastern markets, but the cattle movement is largely to the market at Portland, Oregon, where union stockyards are maintained and operated, and to Puget Sound markets, and the difference in the freight rate from said points
31a of origin to said markets is and will continue to be so great as to compel the movements of livestock for coast destinations to go to Portland.

36. That in its consideration of said cause No. 19680 the Commerce Commission erroneously failed and refused to give legal effect to said established and/or undisputed facts or to any of them or to any evidence introduced by the petitioner and/or the defendants or any of them in said proceeding, and that by reason thereof and upon the record in said cause before said Commerce Commission the said report and the said order of the said commission was and is unreasonable, oppressive, unlawful, arbitrary, and void.

Article XVI. Finding of public convenience and necessity unsupported by evidence

37. That the said order of said Commerce Commission herein complained of was and is arbitrary, unreasonable, unlawful, and void for that said proposed line of railroad ordered by said Commerce Commission to be constructed by petitioner, as aforesaid, is not reasonably required in the interest of public convenience and necessity, and the finding of said Commerce Commission in its report in said cause—

"that an extension of the rail line of the O.-W. R. & N. (referring to this petitioner) now terminating at or near Burns, Oreg., from or near a station thereon designated as Crane, Oreg., to a connection with the Cascade line of the Southern Pacific at, or near, Crescent Lake, Oregon, by the Oregon-Washington Railroad & Navigation Company is reasonably required in the interest of public convenience and necessity"

was and is wholly unsupported by the evidence in said cause, docket No. 19680, and said finding was and is contrary to the evidence taken

in said cause, and that the evidence and the record therein affirmatively shows that said proposed line is not reasonably required in the interest of public convenience and necessity.

Article XVII. Petitioner's ability to perform its public duty impaired by proposed construction

38. That said order of said Commerce Commission was and is in excess of the jurisdiction of said commission and was and is arbitrary, unlawful, and void for that the expense involved as to said line of railroad ordered to be constructed by petitioner as aforesaid will impair the ability of the petitioner to perform its duty to the public, and the finding of said commission in its report in said cause—

32a "that the expense involved therein (referring to said proposed cross-State line) will not impair the ability of the carrier or carriers involved to perform their duty to the public"

was and is wholly unsupported by the evidence in said cause, docket No. 19680, and said finding was and is contrary to the evidence taken in said cause if said finding be considered as referring to petitioner, but in fact said finding was intended to refer to the ability of petitioner, Oregon Short Line Railroad Company and Union Pacific Railroad Company collectively, and the undisputed evidence and record therein affirmatively shows that the expense involved in and as to said so-called extension will impair the ability of petitioner to perform its duty to the public, and said Commerce Commission was without authority to base its said finding upon the financial ability of said Oregon Short Line Railroad Company or said Union Pacific Railroad Company; that said order of the commission is as to this petitioner in excess of the jurisdiction of the commission, arbitrary, unlawful, and void for that said commission has not found, as to said so-called extension, that the expense involved therein will not impair the ability of the petitioner to perform its duty to the public.

Article XVIII. Paragraph 21 of section 1 of interstate commerce act erroneously construed and applied

39. That while by its complaint in said cause, docket No. 19680, said Oregon commission alleged—

"This proceeding is commenced under the provisions of paragraphs (21) and (4) of section 1, of paragraph (3) of section 15, and of paragraphs (3) and (4) of section 15a of the interstate commerce act."

said cause was in fact presented by complainant and entertained by said Commerce Commission under that part of paragraph 21 of section 1 of said interstate commerce act which reads as follows, to wit:

"The commission may, after hearing, in a proceeding upon complaint or upon its own initiative without complaint, authorize or require by order any carrier by railroad subject to this act, party to such proceeding, to provide itself with safe and adequate facilities for performing as a common carrier its car service as that term is used in this act, and to extend its line or lines: Provided,
33a That no such authorization or order shall be made unless the commission finds, as to such extension, that it is reasonably required in the interest of public convenience and necessity, or as to such extension or facilities that the expense involved therein will not impair the ability of the carrier to perform its duty to the public."

And the decision and report of the said Commerce Commission and its said order entered in said cause were based upon said quoted part of said interstate commerce act, and that said Commerce Commission's proceedings in said matter and its consideration thereof and decision therein and its said order herein complained of were taken, had, and made under an erroneous and mistaken conception and theory of the law on the part of said Commerce Commission in the following respects, among others, to wit: In deciding that said paragraph 21 of section 1 of said act, or any other provision or provisions thereof, confer jurisdiction or authority upon said Commerce Commission to require by its order any carrier by railroad subject to said act and particularly this petitioner to (a) build the said or any line of railroad applied for by complainant in said proceeding, or to provide said expansive areas of central Oregon or the Umpqua or Rogue River Valleys or any other alleged inadequately served territory located west of the Cascade Mountains or elsewhere beyond and/or foreign to the territory occupied by petitioner, with the facilities for transportation by railroad, or (b) to open to settlement said vast areas or any additional area in central Oregon, or (c) to afford to shippers an additional or different or any other than existing routes for diverting shipments either north or south when reaching the north and south lines in western Oregon, or (d) to reduce the distance by railroad to eastern markets from any part of western Oregon, or (e) to reduce the distance by railroad from southeastern Oregon and southwestern Idaho to and from Pacific coast markets, or (f) to build branch or feeder lines from the cross-State line ordered by said Commerce Commission to be built by petitioner.

40. That after entering the Harney Valley from the east at or near the station of Crane, petitioner's Ontario-Burns line of railroad diverges to a northwesterly course and proceeds in a northerly direction to its terminus at Burns, where it connects with said Oregon & Northwestern Railroad, extending from Burns in a northerly direction to Seneca, and that said proposed cross-State line ordered to be constructed by petitioner as aforesaid would not be an extension or projection of petitioner's Ontario-Burns line of rail-

road but would proceed in a different direction than does said
34a Ontario-Burns line, and said cross-State line if constructed would be and constitute a branch line from said Ontario-Burns line, and would be entirely foreign to and beyond the scope of the provisions of said paragraph 21 of section 1 of said interstate commerce act; that said Commerce Commission in deciding that said proposed cross-State line would constitute an extension of petitioner's said line of railroad, and in ordering construction thereof as such, misconstrued and erroneously applied said provision of said interstate commerce act in conflict with its legal import.

41. That said paragraph 21 of section 1 of said interstate commerce act relates to, is associated with and the provisions thereof restricted by paragraph 10 of said section 1 of said act wherein the term "car service" is defined; and if said provision for extension of line or lines was or is valid or enforceable in any circumstances, the scope and extent of said provision of said act was and is confined to and the jurisdiction and authority of the commission thereunder is limited to the power of requiring petitioner to provide itself with such safe and adequate facilities as were and are reasonably required by petitioner in performing its car service in the immediate territory entered and ocupied by its railroad, and which facilities are necessary for the proper performance of the duties assumed by it in said territory local to its existing line and that obtain with respect to it by virtue of its existing railroad enterprise. That the complaint in said cause, docket No. 19680, presents no matter or question within the jurisdiction of said Commerce Commission under said paragraphs 21 or 10 of section 1 of said interstate commerce act, and in entertaining said complaint and in its interpretation and application of said provisions of said act and in making its said report and order in said cause, said Commerce Commission placed an unreasonable construction upon said interstate commerce act and the said provisions thereof and erred in its conception and theory of the law with respect to said matter, and in deciding same and in making said order herein complained of it exceeded its jurisdiction and authority in the premises.

Article XIX. Complainant's case before the Commerce Commission and the report and order of said commission disregard paragraph 4 of section 15 of the interstate commerce act,

42. That the preparation and presentation of testimony on behalf of complainant in said cause, docket No. 19680, whereby
35a to obtain an order of the Commerce Commission for the construction of said proposed cross-State line was by said complainant assigned to J. P. Newell, Esq., its consulting engineer, and in pursuance to said assignment said Newell prepared and presented to said Commerce Commission as evidence in the case his so-called "transportation cost study" and other testimony and exhibits to support said Oregon Commission's complaint in said matter; that said cause of said Oregon Commission was conceived and pre-

sented by it to said Commerce Commission upon the theory and plan of said Newell as reflected by his said cost study and testimony, and the said Newell spoke for the said Oregon Commission in the presentation of its said case; that the Commerce Commission approved and was controlled by the testimony of said Newell in its consideration of said cause and in the rendering of its report and the making of its said order therein. That the said cause of complainant was rested and based upon the premise of requiring the Southern Pacific to interchange the traffic originated by it in western Oregon and destined to eastern points to be surrendered by said Southern Pacific Company to the proposed cross-State line at the proposed junction, Crescent Lake, Oregon, and upon the premise and assumption, as found by the Commerce Commission in its said report, that all of the present rail movement between points in the ten counties in southwestern Idaho and San Francisco, California, and points adjacent thereto would be diverted from existing rail routes to and moved over the proposed cross-State line. By way of introduction and as a part of his testimony in said cause before said Commerce Commission, the said Newell testified:

"The crucial point in this case is the possibility of justly requiring the Southern Pacific to interchange traffic originated by it in western Oregon with the Union Pacific at the proposed junction, Crescent Lake."

And on the same subject said witness further testified:

"Q. You say that the crucial point in this case is the possibility of justly requiring the Southern Pacific to interchange traffic originated by it in western Oregon with the Union Pacific at the proposed junction. You would not assume that the cross-State line would be justified, or should be required, if the western Oregon traffic is not to be routed over that line—by western Oregon traffic that I mean, of course, traffic east and west to western Oregon?

"A. I think that is true.

"Exam. ROGERS. I would like to ask another question, before
36a we get so far from it in the record, and that is as to what traffic you had in mind when you told Mr. Spencer this morning that the cross-State line could not be justified without the western Oregon traffic, as I understood it, eastbound western Oregon traffic?

"A. Yes.

"Exam. ROGERS. Now, what traffic did you have in mind in making that statement?

"A. That traffic which has heretofore been and is to-day moving by the Southern Pacific through Roseville and through Ogden and delivered to the Union Pacific at Ogden.

"Exam. ROGERS. What I had in mind, did you have in mind that in addition to that western Oregon traffic that would, according to your assumption, move across the proposed line, and showing that has been made as to Idaho traffic westbound and that the traffic that would originate on the line?

"A. Well, his question——

" Exam. ROGERS. Just what did you have in mind?

"A. His question referred to the western Oregon traffic only, both in and out, and my answer referred to that, which—it is mostly lumber traffic, and the calculations of such traffic here presented are based first on the inclusion of the amount of traffic now moving, that is, as measured by the 1926 records, as moving to and from western Oregon through Ogden, therefore, traffic which passes over the Union Pacific at present and its natural growth as estimated and presented here plus those figures of natural growth which Mr. Teutsch presented as agricultural and animal product traffic.

" Exam. ROGERS. Well, the question I had in my mind was whether your answer contemplated this situation, that the Idaho traffic and the traffic originated on the cross-State line might move over the cross-State line, but unless it got this western Oregon traffic the line could not be justified?

"A. That was the intent of my answer; yes; I would doubt the justice of a compulsory building.

" Exam. ROGERS. Mr. Newell, one more question about this western Oregon traffic. What is your judgment, in the event that a compulsory or voluntary traffic arrangement is not entered into
37a between the Southern Pacific and the Union Pacific for interchange at Crescent, but assuming that the line is built and through rates established, do you think that the shippers can be depended upon to route their traffic over the cross-State line, notwithstanding that there is no traffic agreement between the carriers?

"A. I think that the shippers would be entirely indifferent to it, except as it might be a matter of speed on shipments where time was an element to the shipper, and I presume there would be a good many cases where that might enter in.

" Exam. ROGERS. Well, do you think that that would be true on lumber?

"A. I doubt if it would be important on lumber. It might be in some cases.

" Q. Well, if the saving that would be possible on that traffic was not being made now, how can you anticipate any part of that traffic would move down to Eugene and move over the cross-State line, merely from the fact that the Southern Pacific would get a part of the haul?

"A. I haven't anticipated it voluntarily. We have asked that it be made compulsory as regards the interchange at Crescent Lake, in spite of the fact that it would actually be profitable to both carriers to do it. * * *"

43. That in pursuance of said plan testimony was introduced on behalf of complainant of transcontinental traffic (as said term is defined in paragraph 10 of this petition) between western Oregon and eastern points and alleged estimates were made of such traffic and other traffic conceived to be possible for the proposed line for several

years, and by said testimony said transcontinental traffic was represented to be 27,218 carloads for the first year of operation of the proposed line and 3,410 carloads of lumber now moving east by petitioner's existing line of railroad from Bend to the East, and said 30,628 carloads of traffic was represented by said witness Newell as producing earnings from the transportation thereof via the cross-State line to the amount of $1,805,880, and said witness credited said proposed cross-State line with said traffic and said earnings, and in said connection and as a part of said plan complainant caused to be made an alleged estimate of other traffic to come into existence by reason of the construction and operation of said proposed line and designated said other traffic as "created traffic" and distributed said created traffic to imaginary destinations and applied rates thereon over said proposed line to said assumed destinations; that said created traffic so estimated was represented to amount to 3,777 car-
38a loads for the year involved, and to produce earnings for said proposed cross-State line of $134,996, and thereby said witness estimated that during the first year of operation of said proposed line 34,405 carloads of revenue freight would be transported over said line, with freight earnings, after deducting direct costs of freight service, amounting to $1,940,876, to which sum said witness Newell added $2,680 as passenger earnings estimated by him for said line during said first year of operation and deducted from the total $1,943,556 the sum of $405,800 indirect expenses and taxes estimated by him for said year, by which computations of the witness an estimated net return of $1,537,756 was made to appear for the first year of operation of said proposed line or 15.5 per cent upon the cost of the line involved, said cost having been estimated by the witness to amount to $9,908,000; that of the traffic capitalized for said proposed cross-State line as aforesaid more than 85 per cent thereof would, according to said proposal and plan, be diverted from existing railroads (for the most part from the Southern Pacific Company's lines) and of the revenue estimated by said witness to be realized therefrom more than 93 per cent thereof would, according to said computations, be derived from said diverted traffic.

44. That said plan and study of complainant in said cause as presented by said witness Newell contemplated and assumed, in addition to the construction of said proposed cross-State line, the purchase by petitioner of an undivided one-half interest in 71 miles of railroad between Bend and Chemult, Oregon, and the diversion by petitioner from its existing Deschutes River line between Bend and Sherman of the lumber traffic now transported over same by petitioner to and from said Bend-Chemult line and thence over the proposed cross-State line, thereby leaving said Deschutes line of petitioner with no substantial traffic to contribute to the expense of its maintenance and operation.

45. That paragraph 4 of section 15 of the interstate commerce act provides:

"In establishing any such through route the commission shall not (except as provided in section 3, and except where one of the carriers is a water line), require any carrier by railroad, without its consent, to embrace in such route substantially less than the entire length of its railroad and of any intermediate railroad operated in conjunction and under a common management or control therewith, which lies between the termini of such proposed through route, unless such inclusion of lines would make the through route unreasonably long as compared with another practical through route which could otherwise be established."

39a That the railroad companies comprising said Southern Pacific lines as described in Article V of this petition and the railroad companies comprising said northern lines as described in Article VII of this petition and the said Oregon Short Line Railroad Company, and each and all of them, appeared and introduced testimony in opposition to the said complaint of the Oregon Commission in said cause, docket No. 19680, and have and will refuse to divert voluntarily their said business to said proposed cross-State line, and this petitioner if it were able to do so would not voluntarily make the suggested purchase of said Bend-Chemult line for the purpose of diverting its Deschutes line traffic thereto.

46. That the Commerce Commission accepted and adopted said plan and proposal of said complainant and the computations and estimates of traffic, revenue and expenses of said Newell in its report in said cause as the basis for its said order herein complained of, and disregarded said provisions of said paragraph 4 of section 15 of said interstate commerce act, and its action in the premises and in making said report and order herein complained of is unreasonable, arbitrary and unlawful, and said action with respect to said matters in this Article XIX of this petition stated was taken and made by said Commerce Commission under an erroneous conception and theory of the law as applied to said facts and with respect to such cases.

Article XX. Bend-Chemult line foreign to issues in the case

47. That the acquisition by petitioner of said Bend-Chemult line of railroad or any interest therein is not proposed or referred to in or by the complaint in said cause, docket No. 19680, and that said matter was not and is not within the issues in said cause but is entirely foreign thereto, and that in entertaining and in considering the same as a part of the case of complainant in said cause and in using the alleged traffic and revenues conceived by the complainant's witness to any extent as a basis for its order upon petitioner to construct said proposed cross-State line, said Commerce Commission exceeded its jurisdiction and acted arbitrarily and without authority of law therefor.

Article XXI. Complainant's assignment of traffic to cross-State line and the estimate of earnings credited to same were unsupported by evidence and were based upon unwarranted assumptions, speculation, and conjecture

48. That in presenting the Oregon Commission's case to the
40a Commerce Commission, the said witness Newell, when questioned for the reasons actuating him in routing via the cross-State line that portion of western Oregon traffic that can move more economically eastbound via the line of petitioner through the Portland gateway than would be possible via the proposed cross-State line, stated that he was "trying to find some way to support the cross-State line." That in arriving at said so-called "created traffic" witnesses were presented by the complainant in said cause who gave their estimates of the tonnage that would be produced and move over the cross-State line and that in arriving at their so-called estimates said witnesses assumed the reclamation and cultivation of vast areas of now arid lands, the obtaining and application upon same of an adequate water supply for the growing of crops and sustaining of livestock, the settlement of said lands and establishment of homes thereon, the successful production of crops and livestock, and the existence of adequate consuming markets justifying the transportation thereof, the rehabilitation, refinancing and settlement of existing reclamation projects that have failed, and the diversion to the cross-State line of said imaginary tonnage from existing railroads. That the existing line of railroad of Oregon Short Line Railroad Company is available for and would ordinarily receive substantially all of said estimated tonnage produced and shipped from Idaho; that tonnage estimated by said witnesses to be created in Oregon amounted for the first year to 5,928 carloads, represented to be produced in 17 different counties; that of said carloads they represented that 863 carloads would be produced in the counties traversed by said cross-State line, and that the remainder of 5,065 carloads would be produced from the remaining 15 counties, all of which are remote from and inaccessible to the proposed cross-State line by any railroad of the petitioner except in the county of Malheur, to which county said witnesses credited an estimated production of 1,241 carloads; that said witnesses increased said estimated traffic to 11,641 carloads for the sixth year of operation of the proposed cross-State line and in doing so credited to Malheur County 5,174 carloads and to said Harney and Lake Counties 2,601 carloads. That no evidence was introduced and no facts established from which the production or movement of any considerable part of said traffic could legally be inferred or presumed, but that the coming into existence of same was and is based upon assumption, speculation, and conjecture, and that in estimating said traffic said witnesses entirely ignored and refused to give legal effect or consideration to the limited volume of traf-

fic established without dispute as having originated on
41a and/or moved over said Deschutes lines of railroad or over petitioner's said Burns-Ontario line of railroad, and with respect to the movement and routing thereof said traffic estimators wholly ignored the influence and control of existing lines of railroad, particularly the said Rogerson-Wells line of the Oregon Short Line Railroad Company; that the proposed routing of said estimated traffic over the proposed cross-State line was and is unreasonable and arbitrary and such movement thereof with respect to all of the traffic originating in the counties other than Malheur, Harney, and Lake is contrary to natural laws, to the interstate commerce act and to long standing and accepted practices of railroads generally in conducting transportation. That of the Oregon counties relied upon by said witnesses for said traffic production, Klamath County is served by two competing transcontinental lines of railroad as hereinbefore described, and by their testimony complainant's witnesses admitted that no substantial business originating in Klamath County would be diverted from the northern lines to said cross-State line; that of said 17 counties, Deschutes, Crook, Jefferson, and Wheeler are substantially the only source of traffic for the support of the existing railroads paralleling the Deschutes River and all of these counties are remote from said proposed cross-State line; that the Blue Mountain Range intervenes between said proposed cross-State line and Wheeler County, and by reason of said barrier, the large distance to be traversed, the arid condition obtaining along the proposed line, the lack of existing or prospective highways, it would be entirely impracticable, arbitrary, and unreasonable to credit traffic from said Wheeler County as available for said proposed line. That Baker County is also credited by said witnesses as a traffic producer for said proposed line, but the same obstacles are present in preventing the movement of any traffic therefrom for said proposed line as exist with respect to Wheeler County, and in addition thereto the said County of Baker is traversed by the main line of your petitioner extending between Portland and Huntington and by branch lines connected therewith in the so-called Homestead branch of petitioner and the Prairie City branch of the Sumpter Valley Railroad Company. That Grant County, likewise included by said witnesses, is served by Oregon & Northwestern Railroad connecting with the railroad of your petitioner at Burns. That all of the other counties included in said traffic estimate are on the west side of the Cascade Range of mountains, and the counties of Lane, Douglas, Lincoln, Coos, and Curry front on the Oregon seacoast and are traversed by the Coast Range of mountains, and Curry County is the
42a extreme southwestern county of the State of Oregon, traversed by no railroad but located more than 250 miles from the proposed cross-State line with great mountain ranges intervening.

49. That in computing the estimated revenue from the traffic thus theoretically diverted and created, complainant called on its behalf a

witness who, testifying as a rate expert, assumed the routing of said traffic over said proposed cross-State line (allowing no western Oregon business to move via Roseville or Alturas) and the routing of all southwestern Idaho traffic to which California destinations were allotted to said cross-State line to the exclusion of both the Salt Lake-Los Angeles line and the Rogerson-Wells line; that in applying said rates said witness emphasized the fact that he did not vouch for the volume of the traffic or the practicability of the movement. That thereupon said witness Newell accepted said traffic estimates and the rates applied thereon, and without sponsoring same but limiting his responsibility to the use and application of said traffic estimates and said proposed rates, prepared and introduced his transportation costs and operating studies and tables upon the assumption that said diverted and created traffic would move via the cross-State line and that the theoretical rates prescribed therefor would be realized from such movement; that said witness Newell testified that his entire studies were conditioned upon said assumed premises and that in the event of error or failure with respect to either of said assumed premises then his said studies, conclusions, and estimated earnings for said proposed cross-State line would fail and fall with such erroneous assumption; that said conclusions of said witness Newell are entirely unsupported by any facts or by any evidence from which a legal inference or presumption can be deduced; that nevertheless the said Commerce Commission accepted and adopted said estimates, rate applications, routings, and traffic movements conceived by said witness and the computations and conclusions of said Newell with respect thereto, all as a basis for the order of said commission herein complained of, and that the action of said commission in so doing was and is unreasonable, unlawful, and arbitrary, and that its order made in pursuance thereof was and is unsupported by evidence and was and is unlawful, unreasonable, and void.

Article XXII. Claim of savings from cross-State line plainly erroneous

50. That complainant's said case before the Commerce Com-
43a mission was and is based upon the contention by complainant that large economies and savings would be accomplished by the movement of Oregon traffic over the proposed cross-State line as compared with its movement over the Southern Pacific's route to Ogden either via Roseville or via Alturas; that in support of this contention said witness Newell introduced a table purporting to show net earnings on such traffic via Crane and the cross-State line with the interchange at Crescent Lake in comparison with the net earnings on such traffic moving via the Southern Pacific's route through Alturas with the interchange at Ogden, and according to said table so produced by the witness there were involved 17,284 carloads eastbound as compared with 788 carloads westbound, and thereby the

net earnings to the Union Pacific system lines are made to appear greater by $569,733 upon interchange of same at Crescent Lake as compared with interchange of such traffic at Ogden, and the net earnings of the Southern Pacific system upon said traffic are made to appear greater by $18,317 by making interchange of same at Crescent Lake instead of at Ogden; that said table and the computations therein were prepared and presented by said witness upon the assumption that the empty cars for said western Oregon business would be hauled from the East and as to cross-State line operations would be interchanged at Crescent Lake, and that the cost of moving said empty cars by the Union Pacific system lines from its eastern terminal at Omaha to Crescent Lake would amount to $130.05 per empty car, but in arriving at the conclusions stated in his said table of net earnings he charged to said eastbound loads only 60 per cent of the cost of moving said empty cars west for said eastbound traffic, whereas as appears in his said table the movement is 17,284 carloads eastbound as compared with 788 carloads westbound, or a preponderance eastbound of more than 95 per cent, and if the said actual cost of moving said empties westbound were charged against the said eastbound loads at $130.05 per car, said table would reflect an increased cost for said 35 per cent of said cars omitted as aforesaid amounting to $822,592, and instead of reflecting an increase in net earnings of $569,733 said table should in fact show a net loss of $252,859, but the same method of computing costs and net earnings was pursued and carried through and is reflected in the table and testimony of said witness discussed in paragraph 43 of Article XIX of this petition; that said tables and other tables and computations by said witness Newell were accepted and adopted by said Commerce Commission in its said report herein as a basis for its order herein complained of, and that the same and all thereof were and are
44a fictitious and arbitrary and the conclusions therein are mathematically erroneous in the light of the premises stated by said witness Newell, particularly with respect to cost involved in moving empty cars west for the purpose of transporting western Oregon business east via the proposed cross-State line; that the action of said Commerce Commission in accepting said computations of said witness Newell reflected by said tables set forth in its report as aforesaid as any basis or support for its said order in said cause was unreasonable, arbitrary, and unlawful.

Article XXIII. Other findings of Commerce Commission are unsupported by evidence and contrary to established facts

51. That in and by its report in said cause, docket No. 19680, said Commerce Commission made findings unsupported by evidence, contrary to the undisputed evidence in the case, and/or contrary to facts of common knowledge and of judicial cognizance as follows, to wit:

(a) Said commission found that "traffic now originating in western Oregon and destined to eastern points must move either south to

Roseville, California, or north to Portland, Oregon, before the eastward movement in reality begins," while in fact said Alturas line of the Southern Pacific Company was authorized and constructed for the movement of said traffic and is being used for the transportation thereof.

(b) Said commission found that "similar movement is experienced on traffic originating in eastern Oregon and southwestern Idaho destined to California points and to points in southwestern Oregon," while in fact existing routes afford substantially as direct and more efficient routes for said transportation to California destinations than can be afforded by the cross-State line, and no substantial movement of traffic to southwestern Oregon points has obtained from eastern Oregon and southwestern Idaho in the past, nor is it reasonably probable that such movement will obtain in the future if the cross-State line were built.

(c) Based upon its findings quoted in (a) and (b), said commission further found that "the resulting longer haul and greater time consumed renders it impossible to ship certain commodities of a perishable nature to what would be available markets if the shorter routes to be provided by the proposed extension were available," but for the reasons stated by petitioner in (a) and (b) above said
44a finding is an arbitrary conclusion unsupported by the evidence.

(d) Said commission's finding that "the major portion of the State of Oregon is without adequate transportation facilities, and this is particularly true with respect to the portion which would be served by the proposed construction," is an arbitrary finding and conclusion, contrary to the undisputed facts in the record, for that it appears that railroad construction in said state has been extensive and accomplished at great cost, and said railroads, including this petitioner, have been unable to obtain adequate traffic in respect of their Oregon operations (State and interstate combined) whereby to realize a reasonable return upon said investments already made, or any of them.

(e) Said commission's finding that "the basic resources of the territory which would be affected by the proposed line are lumber, grain, livestock, farm products, dairy products, and fruits" is unreasonable and arbitrary, for that by the undisputed testimony and actual experience said resources in producing territory will continue to be served by existing railroads and the conclusion that same will be affected by the proposed cross-State line is based solely on speculation and conjecture.

(f) Said commission's finding that "in addition to irrigated lands there is considerable land in this territory which can be 'dry' farmed so as to produce certain crops" is contrary to the undisputed evidence in the case; and the fact that said territory is not and can not be substantially productive of crops is a matter of common knowledge and of judicial cognizance.

(g) Said commission's finding that "there are very considerable stands of timber which could be opened up following the construction of this line. This timber is mature and will deteriorate rapidly" is arbitrary, for that by the undisputed testimony in the case there are no substantial timber areas adjacent to or reasonably accessible to said proposed line.

(h) Said commission's finding that "the timber in the Ochoco National Forest, as well as the privately owned timber in eastern and southeastern Crook County, southeastern Wheeler County, and southwestern Grant County, will be found tributary to the proposed line" is contrary to the undisputed evidence in the case and the implication that said timber or any thereof is available as traffic is unwarranted, for that no release of said timber in said national forests or any national forest for cutting has been or is assured, and no owner of private timber or mill operator has proposed or
46a assured the sale or cutting of said timber in the near future or the construction of mills required to manufacture the same.

(i) Said commission's finding that "the timber in the Deschutes National Forest, as well as the privately owned timber in northern Klamath County, while tributary in part to the Southern Pacific and the Great Northern, will be served in part by the proposed railway line" is arbitrary and contrary to the undisputed evidence in the case.

(j) Said commission's estimate of agricultural production and of the area of the land being farmed and of irrigated lands in Malheur County as stated in said report is grossly excessive, contrary to past experience and existing conditions and to official reports by Federal and State authorities pertaining thereto, and is based upon speculation and conjecture, and the findings of said Commerce Commission in said matters were and are arbitrary and unreasonable, and same is true as to the findings of said commission with respect to Lake and Harney Counties, particularly as to the estimate of prospective timber shipments and the representation that agricultural crops are being produced in a substantial volume by water pumped from wells in Lake County, the fact being that said reference pertains to a 60-acre tract of land upon which a well was driven by and at the expense of the State of Oregon, and the photographs referred to in said commission's report pertain to said isolated operation that has been conducted without expansion and with varying success over a considerable period of years at a location that is approximately 30 miles east of the Great Northern's Bend-Klamath line of railroad and said location is accessible to that railroad; that the finding that dry farming has not been carried on in Harney County due to lack of transportation by which to get products to market at reasonable cost is unreasonable and unsupported by the evidence in the case, and the reference to the driving of cattle from Harney County to Winnemucca instead of shipping same out by railroad refers to an isolated instance that happened in 1923 before the railroad to Burns was

constructed and before the Rogerson-Wells line was completed, and is irrelevant to existing conditions; that the commission's conclusions with respect to traffic possibilities at Alkali Lake is also involved in speculation and conjecture and the statement of the growing demand obtaining for the commodity (soda) is grossly exaggerated, unsupported by the evidence and contrary to the undisputed testimony in the record with respect to commerce conditions controlling the industry; that the said Alkali Lake is located some 20 miles,
47a more or less, from the proposed cross-State line and in order to accomplish substantial production large capital expenditure would be required in the construction of a plant and facilities at the location, and the construction of a railroad to connect with said proposed cross-State line, with a production according to the undisputed testimony of its proponents of only two to three carloads per day of low rated commodity situated remote from consuming markets; that the assumption that the proposed line would serve territory extending 50 miles on each side thereof is unreasonable, and in fact no areas capable of substantial production obtain in central as great as
Oregon at distances ~~within~~ 50 miles from existing railroads.

(k) The commission's implication that the State of Oregon is suffering from a shortage in car supply and that "the construction of the proposed extension would greatly relieve car shortages by avoidance of the long haul by present routes and by making available the supply of cars of the Union Pacific system" is unreasonable, unsupported by the testimony and contrary to the undisputed evidence in the case, for that the car shortage referred to by the commission in said finding on said matter pertained to instances when lumber
abnormal demand for ~~labor~~ obtained many years ago and long before the construction of the numerous railroads hereinbefore described; that the supply of cars for western Oregon by the undisputed facts in the case can be more readily and efficiently met by the making of empties at Portland and the bringing in and distribution of empties through Portland than by bringing empties across the proposed desert route.

(l) The commission's finding that the 10 counties of southwestern Idaho look principally to California for markets is contrary to the undisputed evidence in the case, for that during its commercial growth and development, as reflected by undisputed statistical data introduced during the hearing before the Commerce Commission, the shipments from said counties to the Pacific Northwest markets have greatly exceeded shipments to the California markets, and of the shipments to California destinations those to southern California in the Los Angeles district have greatly predominated, but with respect to some of the staple commodities extensively produced in said Idaho counties there has been a wide distribution throughout the States, particularly in the case of potatoes, which have found destination in carload lots in nearly every State in the Union, and

while in the case of cattle the shipments to the Pacific Northwest have predominated, sheep and lambs move in much greater
48a volume to eastern markets, and the San Francisco territory is so largely supplied with such products from areas intervening closer than southern Idaho that it has been unable to absorb the products from southern Idaho in the large volume anticipated upon the construction of the Rogerson-Wells line and its incapacity to do so has been so demonstrated by the undisputed facts in the record that such result can not be accomplished by the construction of the proposed cross-State line; that southwestern Idaho is a semi-arid country and the finding that dry farming can be successfully conducted therein is contrary to long past experience and to common knowledge and the evidence in the case; that successful production in said section is dependent upon irrigation is demonstrated by the record and the large expenditures made in the reclamation of lands and is a matter of judicial cognizance.

(m) The conclusion of the commission that the proposed construction would be a valuable asset to the Union Pacific system, or that the same would bring about a development in a vast territory or would be of material benefit to the present Ontario-Burns branch, is unsupported by the evidence in the case and contrary to the undisputed facts established by the record in said cause, and is based and arrived at solely upon speculation and conjecture.

(n) The finding of the commission that traffic moving from the East to western Oregon would logically move via the proposed cross-State line is contrary to and unsupported by the undisputed evidence in the case and is unreasonable and based upon conjecture and speculation.

(o) The commission's finding that "there is also substantial evidence that construction of feeder lines by other companies in western Oregon would follow construction of the proposed extension and that such lines would bring to the proposed line considerable traffic" is unreasonable, arbitrary, and based entirely upon speculation and conjecture, and there is no evidence in the record supporting such conclusion.

52. That the said order herein complained of was and is unreasonable, unlawful, and arbitrary, in that the making of same was induced by, and said order was in part based upon, said erroneous findings hereinbefore in this Article XXIII complained of, and that in the making of same said commission gave consideration to, approved, and acted upon matters foreign to and beyond the issues in said cause.

49a Article XXIV. Commerce Commission exceeded its jurisdiction and erroneously construed and applied law

53. That said Commerce Commission considered said cause, docket No. 19680, and made its report and order therein under erroneous conceptions and theories of the law applicable thereto

in the following, among other, particulars, viz, in erroneously assuming:

(a) That the provisions of the interstate commerce act contemplating efficient and economical management in the administration and operation of railroads subject to said act empower it, the said commission, to require by its order the construction by any such railroad of new, additional and different railroads than the existing railroads of such carrier or carriers, and thereby to establish other and different railroad routes and to direct, require, and compel the carrier or carriers involved to divert thereto its or their traffic from existing lines.

(b) That it, the said Commerce Commission, was clothed with authority and jurisdiction to require a carrier by railroad to construct a railroad line or lines into territory not reached or served by its existing line or lines and to develop, reclaim and render accessible for settlement vast unsettled areas remote from its said existing line or lines.

(c) That one common carrier by railroad subject to the interstate commerce act can acquire or be required by order of said commission to acquire an interest in, with right to use or joint use of or trackage rights over, another carrier by railroad subject to the act irrespective and in disregard of the desire of said carriers or either of them.

(d) That a common carrier by railroad subject to the interstate commerce act can be required by order of said Commerce Commission to build a line of railroad from a connection with its existing railroad to a connection with another railroad subject to said act to enable a shipper or shippers on its said originating railroad to ship and transport via such proposed route to the said proposed connection whereby to enable such shipper to test markets upon arrival at said proposed point of connection, and there to divert his said shipments to such destinations as he may determine upon.

(e) That the proposed line of railroad ordered by said Commerce Commission to be constructed by petitioner herein, from or near a station on its existing Ontario-Burns line of railroad designated as Crane, Oregon, to a connection with the Cascade line of
50a the Southern Pacific Company at, or near, Crescent Lake, Oregon, is in fact or law within the contemplation of paragraph 21 of section 1 of the interstate commerce act an extension of the line of railroad of petitioner now terminating at or near Burns, Oregon.

(f) That it was and is within the power and jurisdiction of the said Commerce Commission to require by its order the commencement of construction of said proposed line of railroad on or before July 1, 1930, and the completion of same and placing of it in operation before July 1, 1933, or within or before any other specified time.

(g) That the language of Congress (referring to paragraph 21 of section 1 of the interstate commerce act) does not afford the slight-

est foundation for a construction thereof which would limit the power of the Commerce Commission to comparatively short extensions in territory already served by the carrier or carriers involved.

(h) That but two conditions must be satisfied before the issuance of an order requiring such construction, (1) that the extension is reasonably required in the interest of public convenience and necessity, and (2) that the expense involved will not impair the ability of the carrier or carriers involved to perform their duty to the public, and that an order requiring construction beyond the territory local to and served by the carrier involved and not limited to facilities for performing by such carrier its car service, as said term is used in the interstate commerce act, is within the contemplation of said act and within the jurisdiction of the Commerce Commission to make, and that it is unnecessary to show as a condition for the granting of said order by said commission that the railroad so ordered to be constructed by the carrier involved will be able when constructed to earn its necessary operating expenses and lawful and necessary charges fixed upon it and its operations and/or a reasonable or any return upon the investment required and necessarily involved in its construction, and/or that said railroad considered as standing alone would of itself earn sufficient revenues to make it profitable.

(i) That the Union Pacific Railroad Company, Oregon Short Line Railroad Company, and Oregon-Washington Railroad & Navigation Company must for the purpose of said cause be considered together as one railroad company; that while title to the Ontario-Burns branch is held by the Oregon-Washington Railroad & Navigation Company, it is in reality owned by the Union Pacific Railroad Company through the ownership of the Oregon Short Line
51a Railroad Company, and in turn the latter's ownership of the Oregon-Washington Railroad & Navigation Company; that the relationship of the so-called extension to the Union Pacific system lines and its possibilities as a developer of traffic for the lines of railroad comprising that system must be considered and that as a basis for the making of said order it was proper, relevant, and material to show and consider a consolidated financial statement reflecting the result from railroad operations and from corporate investments of all of the four corporations comprising the Union Pacific system and to disregard the financial condition and earning ability of this petitioner and all other elements pertaining to the question of whether as to this petitioner the expense involved in the proposed railroad would impair its ability to perform its duty to the public; and that the making of said order complained of was and is justified and within the jurisdiction of the said Commerce Commission to make because it, the said commission, expects "that the cost of construction will be financed by the Union Pacific in a manner similar to that which it voluntarily followed in the construction of the

Burns extension," and that "it would be inconsistent and contrary to fairness to consider the new construction with relation only to the O.-W. R. & N. and apart from the Oregon Short Line and the Union Pacific."

(j) That the Commerce Commission has the same power and jurisdiction to compel the construction by an existing carrier by railroad subject to the interstate commerce act of a line of railroad upon a route specified by said commission from a connection with the railroad of such carrier, into and through territory not served by its existing lines and to a connection with another or other railroads remote from its existing lines whereby "a reasonable chance to develop a great State" may be afforded, as it, the said Commerce Commission, has to permit such carrier by railroad voluntarily to locate its own route and construct a railroad thereon into or through such territory for like or other purpose; and that any showing before the said Commerce Commission by such applying carrier that would in the opinion of said commission justify it in granting the said application of said carrier would be sufficient to sustain and justify said commission in requiring such carrier contrary to its judgment and will to construct such railroad as said commission determines upon along a route and within a time specified by said commission, and to operate the same.

54. That in its consideration of said cause, docket No. 19680, and in the making of its report and order therein, said Commerce
52a Commission applied and followed all and singular said erroneous conceptions and theories as reflected by said subdivisions (a) to (j), inclusive, of paragraph 53, Article XXIV, of this petition, and thereby and not otherwise said commission made said order herein complained of, and that each and all of said assumptions by said commission were and are contrary to law; that said Commerce Commission did not find or attempt to find, nor did it determine or attempt to determine whether said proposed construction by this petitioner, Oregon-Washington Railroad & Navigation Company, as a carrier by railroad subject to the interstate commerce act is or would be reasonably required in the interest of public convenience and necessity, or whether as to said proposed construction or facilities the expense involved therein would or will impair the ability of this petitioner to perform its duty to the public; that in each and every of said matters so conceived, assumed, and acted upon by said Commerce Commission in making its said decision and order as aforesaid, said commission proceeded and acted upon a fundamentally erroneous theory of the law and in disregard and in violation of the limitations of said commission's powers under the interstate commerce act and of the rights of this petitioner under the law, and by its said order said commission imposed upon this petitioner an investment and an operation for which no duty rests upon this petitioner under the law.

Article XXV. Petitioner's property appropriated by unreasonable construction given to paragraph 21 of section 1 of the interstate commerce act

55. That by the undisputed evidence in said cause, docket No. 19680, if the said proposed diversion to the cross-State line of the said western Oregon traffic from the Southern Pacific Company and of said southwestern Idaho traffic from the Oregon Short Line Railroad Company is not accomplished as suggested, the necessary out-of-pocket expense that must be incurred to reasonably maintain and operate said proposed cross-State line and to pay the current general taxes thereon will exceed the total operating revenues that can be obtained from its operations by at least $281,500 per annum, and the necessary cost of constructing and equipping said proposed railroad will exceed $9,000,000; that petitioner is without any funds available for said enterprise and if it can obtain same from any source the cost thereof to petitioner would amount to at least $540,000 per annum; that the said interpretation of said interstate commerce act, and particularly par'graph 21 of section 1 thereof, by said
53a Commerce Commission, and the order of said commission in pursuance of said interpretation whereby said loss, cost and expense and continuing loss, cost and expense will be imposed upon and necessarily incurred by petitioner and whereby this petitioner will be compelled to construct extensive railroad mileage into territory with respect to which it has no existing duties, is plainly unreasonable and leads to absurd and impracticable consequences; that the powers thus assumed by said commission transcend the power of regulation granted to it by said interstate commerce act, and amount to the assumption by said commission of the rights of both proprietorship and of management of petitioner's property; that in making and entering said order herein complained of said Commerce Commission acted arbitrarily and contrary both to the express provisions and manifest intent of said interstate commerce act and beyond its powers under said act and beyond the powers which could be granted to it by Congress under the Constitution of the United States.

Article XXVI. Provision concerning extensions of railroad lines in paragraph 21 of section 1 of interstate commerce act, as construed and applied by Commerce Commission is unconstitutional

56. That the provision in paragraph 21 of section 1 of the interstate commerce act with respect to the extension of the line or lines of carriers by railroad, as construed and applied by said Commerce Commission in making its said report and order was and is unconstitutional and void for that:

(a) Such legislation transcends the powers of Congress under the commerce clause of section 8, Article I, of the Constitution of the

United States in that it goes beyond the field of regulating commerce among the several States, and as so construed and applied it drafts the petitioner and appropriates its property for the reclamation and settlement of waste and unoccupied lands, the attempted creation of new traffic from such lands, and the location and establishment of new and different railroads and routes for serving such lands and for transporting such new traffic if any to be created therefrom and for handling other traffic proposed to be diverted from existing railroad lines; and the power to enact such legislation is not among the powers granted to Congress by the Constitution of the United States or the amendments thereto but is withheld from Congress by the tenth amendment to the Constitution of the United States.

(b) Said provision, as so construed and applied, will de-
54a prive petitioner of its property without due process of law in violation of the fifth amendment to the Constitution of the United States, the manner and extent of such deprivation being more particularly set forth in Article XXVIII of this petition.

(c) Said provision, as so construed and applied, will cause a substantial proportion of petitioner's property to be taken for public use without just or any compensation in violation of the fifth amendment to the Constitution of the United States, in that it will cause petitioner's said property to be used for the public purpose of re-
undeveloped
claiming and developing vast ~~desert~~ areas located in territory which petitioner has not undertaken to occupy or serve.

(d) Said provision, as so construed and applied by said Commerce Commission, will deprive petitioner of the liberty of managing and controlling its properties, in violation of the fifth amendment to the Constitution of the United States.

That petitioner now invokes and by its answer and brief filed with said Commerce Commission in said cause did then invoke the protection of the Constitution of the United States and said amendments thereto against the application of said provisions of said interstate commerce act as so construed by said Commerce Commission, and the petitioner asks the protection of said constitutional provisions and each thereof against the enforcement of the said order of said Commerce Commission herein complained of.

Article XVII. Commerce Commission's order invalid

57. That because said order of said Commerce Commission herein complained of is supported by no substantial evidence but is wholly unsustained by proof and is contrary to the undisputed character of the evidence adduced upon said hearing of said cause, docket No. 19680, and because of the erroneous, unreasonable, arbitrary, and illegal assumptions, acts, and conclusions of the said Commerce Commission in the hearing, consideration, and decision of said cause, all as hereinbefore in this petition set forth, and because the said

order of said commission is in violation of the Constitution of the United States and said amendments thereto, said order is unlawful, null, and void.

Article XXVIII. Irreparable injury threatened

58. That petitioner's railroad and equipment has cost in excess of $173,000,000 and the full and fair value thereof on the date of
55a the order herein complained of was and it is now substantially in excess of said sum, and that at said times its funded debt amounted to and is $95,074,575, represented by 4 per cent mortgage bonds outstanding, and its indebtedness to affiliated companies amounted to $25,973,759.77 as of December 31, 1927, and now exceeds said sum; that petitioner has been unable for ten years last past (except during the year 1926) to earn sufficient income from its operations to pay during any of said years its necessary operating expenses, rentals, taxes, and interest on its said debt; that its operations extend into and through important cities of the Pacific Northwest, including, Portland, Oregon, and Tacoma, Seattle, Spokane, Walla Walla, and Yakima, Washington, and that said operations have for several years last past required and will require for an indefinite period in the future large capital expenditures for grade separations and other local improvement assessments, a large part of which have been and are classified as additions and betterments and charged as additional investment in road and equipment, and the same conditions have obtained, obtain now, and will obtain in the future with respect to its lines of railroad generally, and particularly is this true in the matter of improvements in main line trackage, lengthening of passing tracks, replacements, terminal properties, and facilities, and other improvements that can not be avoided by any well conducted railroad in the normal maintenance and operation of its properties; that to meet said expenditures in the past petitioner has been compelled in large measure to borrow the funds required therefor and will be compelled to do so for a substantial and indefinite time in the future; that if said order herein complained of be permitted to become effective according to its terms, and unless and until said order is set aside and annulled by order of this court, the same will cause this petitioner great and irreparable injury and loss, and that in addition to the showing thereof hereinbefore made petitioner alleges and shows more particularly the nature of such irreparable injury and loss to be as follows:

(a) That said proposed railroad if constructed would cost at least $11,000,000 and would, if the petitioner were able to obtain the funds therefor, increase the long term interest bearing indebtedness of said petitioner by said amount and thereby seriously impair if not entirely destroy the credit and ability of petitioner whereby to raise and obtain the necessary funds currently required by it for improvements, additions, and betterments, as hereinbefore alleged.

(b) That petitioner's outstanding securities would suffer
56a and shrink in the market value thereof, to petitioner's serious loss and discredit in the financial markets of the country.

(c) That petitioner's ability to perform its duty to the public would be thereby seriously impaired.

(d) That said proposed railroad, if constructed, would terminate at a point in the Cascade Mountains more than one hundred miles from any line of railroad owned, controlled, or operated by petitioner or from any railroad company of the Union Pacific system, and several hundred miles from any railroad terminal of petitioner or of any railroad in said Union Pacific system of railroads, with the result that efficient and successful operation thereof by or under the direction of petitioner would be impracticable, but if efficient and economical management could be accomplished the operation thereof would necessarily entail a deficit of approximately $1,000,000 per annum.

(e) That to the extent traffic now received by petitioner from western Oregon and/or from southern Idaho is diverted from petitioner's present lines to said proposed cross-State line, the inadequate earnings of petitioner during recent years and now by its existing lines of railroad will be decreased and its ratio of operating expense to operating revenues will be greatly increased.

(f) That if petitioner refuses or neglects to comply with said order of said Commerce Commission it will, by the provisions of said paragraph 21 of section 1 of said interstate commerce act, as construed and applied by said commission and as same will be construed and enforced by defendant, be liable to a penalty of $100 for each day during which such refusal or neglect continues, and be exposed to repeated actions by the United States for the recovery by it of said accruing and accumulating penalties.

59. That petitioner has no adequate remedy at law in the premises.

Prayer

Wherefore, petitioner prays that a decree be entered herein setting aside, annulling, and suspending said order of the Interstate Commerce Commission hereinbefore set forth, and that the defendant, its officers and agents, be perpetually enjoined from enforcing or attempting to enforce said order; that the defendant and its officers and agents be perpetually enjoined from instituting or prosecuting any action or proceeding to recover any penalty or pen-
57a alties from the petitioner by reason of its refusal or neglect to comply with said order of the Interstate Commerce Commission; that the said provision in paragraph 21 of section 1 of the interstate commerce act concerning the extension of the line or lines of carriers by railroad subject to said act as construed and applied by said Commerce Commission as aforesaid be declared unconstitutional and void, and that the petitioner have such other and further relief in the premises as justice and equity may require.

The petitioner further prays that it be granted an interlocutory injunction pending the final hearing and decision of this cause whereby said defendant, its officers and agents be enjoined and restrained as hereinbefore prayed, and that upon final hearing the said injunction be made perpetual.

OREGON-WASHINGTON RAILROAD
& NAVIGATION COMPANY,
By J. P. O'BRIEN, *General Manager.*

HENRY W. CLARK,
J. M. SOUBY,
ARTHUR C. SPENCER, and
ROY F. SHIELDS,
Its Solicitors.

58a [*Duly sworn to by J. P. O'Brien; jurat omitted in printing.*]

59a *Exhibit A to petition*

Docket No. 19680. Filed May 24, 1927

Before the Interstate Commerce Commission

PUBLIC SERVICE COMMISSION OF OREGON, COMPLAINANT

vs.

CENTRAL PACIFIC RAILWAY COMPANY, DES CHUTES RAILROAD COMPANY, Great Northern Railway Company, Northern Pacific Railway Company, Oregon Electric Railway Company, Oregon Short Line Railroad Company, Oregon Trunk Railway, Oregon-Washington Railroad & Navigation Company, Southern Pacific Company, Spokane, Portland & Seattle Railway Company, and Union Pacific Railroad Company, defendants

COMPLAINT

The complaint of the above-named complainant respectfully shows:

I. Complainant is a duly and regularly created and existing department of the State government of the State of Oregon and is authorized by law to file complaints before the Interstate Commerce Commission in the interest of the public.

II. The Central Pacific Railway Company is a corporation organized and existing under and by virtue of the laws of the State of Utah and is a common carrier engaged in the transportation of passengers and property wholly by railroad between points in the State of Oregon and points in other States and as such common carrier is subject to the provisions of the interstate commerce act as amended and supplemented. It owns lines of railroad within the State of Oregon, which lines are operated under lease by the Southern Pacific Company.

The Des Chutes Railroad Company is a corporation organized and existing under and by virtue of the laws of the State of Oregon and is a common carrier engaged in the transportation of passengers and property wholly by railroad between points in the State of Oregon and points in other States, and as such common carrier is subject to the provisions of the interstate commerce act as amended and supplemented. It owns lines of railroad within the State of Oregon, which lines are operated under lease by Oregon-Washington Railroad & Navigation Company.

Great Northern Railway Company is a corporation organized under the laws of the State of Minnesota and is a common carrier engaged in the transportation of passengers and property wholly by railroad between points in the State of Oregon and points in other States, and as such common carrier is subject to the provisions of the interstate commerce act as amended and supplemented. It operates under leasing arrangements or trackage rights from other carriers certain trains over lines of railroad within the State of Oregon. It owns one-half of the capital stock of Spokane, Portland & Seattle Railway Company except directors' qualifying shares.

60a Northern Pacific Railway Company is a corporation organized under the laws of the State of Wisconsin and is a common carrier engaged in the transportation of passengers and property wholly by railroad between points in the State of Oregon and points in other States and as such common carrier is subject to the provisions of the interstate commerce act as amended and supplemented. It owns one-half of the capital stock of the Spokane, Portland & Seattle Railway Company except directors' qualifying shares. It owns and operates certain lines of railroad within the State of Oregon.

Oregon Electric Railway Company is a corporation organized and existing under and by virtue of the laws of the State of Oregon and is a common carrier engaged in the transportation of passengers and property wholly by railroad between points in the State of Oregon and points in other States and as such common carrier is subject to the provisions of the interstate commerce act as amended and supplemented. It owns and operates by electricity lines of railroad within the State of Oregon. Its capital stock is owned by the Spokane, Portland & Seattle Railway Company except directors' qualifying shares.

Oregon Short Line Railroad Company is a corporation organized and existing under and by virtue of the laws of the State of Utah and is a common carrier engaged in the transportation of passengers and property wholly by railroad between points in the State of Oregon and points in other States, and as such common carrier is subject to the provisions of the interstate commerce act as amended and supplemented. It owns and operates lines of railroad within the State of Oregon.

Oregon Trunk Railway is a corporation organized and existing under and by virtue of the laws of the State of Washington and is a

common carrier engaged in the transportation of passengers and property wholly by railroad between points in the State of Oregon and points in other States and as such common carrier is subject to the provisions of the interstate commerce act as amended and supplemented. It owns and operates an interstate line of railroad between Fallbridge, Washington, and Bend, Oregon. Its capital stock is owned by the Spokane, Portland & Seattle Railway Company, with the exception of directors' qualifying shares.

Oregon-Washington Railroad & Navigation Company is a corporation organized and existing under and by virtue of the law of the State of Oregon. It is a common carrier engaged in the transportation of passengers and property by railroad between points in the State of Oregon and points in other States and as such common carrier is subject to the provisions of the interstate commerce act as amended and supplemented. It owns and operates numerous lines of railroad within the State of Oregon, including a line of railroad extending westward from Ontario to Crane, which line is operated under lease by the Oregon Short Line Railroad Company. Its capital stock is owned by Oregon Short Line Railroad Company, with the exception of directors' qualifying shares.

Southern Pacific Company is a corporation organized and existing under and by virtue of the laws of the State of Kentucky and is a common carrier engaged in the transportation of passengers and property wholly by railroad between points in the State of Oregon and points in other States and as such common carrier is subject to the provisions of the interstate commerce act as amended and supplemented. It owns and/or operates under lease and otherwise a number of lines of railroad within the State of Oregon.

Spokane, Portland & Seattle Railway Company is a corporation organized and existing under and by virtue of the laws of the State of Washington and is a common carrier of passengers and property wholly by railroad between points in the State of Oregon and points in other States and as such common carrier is subject to the provisions of the interstate commerce act as amended and supplemented. It owns and/or operates under lease or otherwise certain lines of railroad within the State of Oregon.

Union Pacific Railroad Company is a corporation organized and existing under and by virtue of the laws of the State of Utah and is a common carrier of passengers and property wholly by railroad between various points in Utah, Colorado, Wyoming, Kansas, and Nebraska and points in the State of Oregon and other States, and as such common carrier is subject to the provisions of the interstate commerce act as amended and supplemented. It owns the entire capital stock of the Oregon Short Line Railroad Company. The Union Pacific Railroad Company and the Oregon Short Line Railroad Company together own the entire capital stock of the Los Angeles & Salt Lake Railroad Company. The Union Pacific Railroad Company, Oregon Short Line Railroad Company, Oregon-

Washington Railroad & Navigation Company, and the Los Angeles & Salt Lake Railroad Company comprise what is
61a known and designated commonly as the Union Pacific system.

The four corporations are treated as one and their operations and the statistics relating thereto are included in the report of the Union Pacific Railroad Company.

III. The above-mentioned defendants provide in substance the the service of transportation of passengers and property performed by common carriers within the boundaries of the State of Oregon, both in interstate and in intrastate commerce. Some additional service of transportation of passengers and property performed by the defendants above named are furnished and performed by other common carriers but the defendants named deliver a very great part of the total number of passengers and the total volume of freight tonnage reaching destination at points within the State of Oregon in either interstate or intrastate commerce and originate by far the largest part of the total passenger and freight traffic moving from points within the State of Oregon in either intrastate or interstate commerce.

IV. The defendants in the past have failed and refused and still fail and refuse to provide a very large area of many thousand square miles in extent in central Oregon with adequate and reasonable facilities of transportation by railroad, although the existing line of railroad from Ontario, Oregon, to Crane and to Harriman, Oregon, is a part of a line of railroad projected many years ago by the Union Pacific system to extend from Ontario in a westerly direction across the State to a connection at some suitable point in western Oregon with the Southern Pacific Company. Between (a) Crane or Harriman in eastern Oregon and (b) Crescent Lake or some point in the vicinity thereof on the existing line of railroad operated by the Southern Pacific Company and commonly known as the Natron cut-off there is a practicable and feasible route for the construction of a line of railroad, which, when built, would provide such facilities. Adequate provision without delay of such facilities is demanded by public interest, convenience, and necessity. The expense involved in the extension of lines aforesaid will not impair the ability of the defendants or any of them to perform their duty to the public.

V. Some of the consequences of the failure and refusal of the defendants or some of them to build and operate a line of railroad through and across central Oregon as aforesaid are as follows:

1. The development of a vast area of the territory of the State is prevented and rendered virtually impossible.

2. The natural resources of such undeveloped area and its possibilities for producing traffic for a railroad across the State, although extensive, are rendered of little or no value.

3. Much of the freight and passenger traffic (both intrastate and interstate) handled by the defendants from and to points in Oregon must traverse unduly and unreasonably circuitous routes.

4. Much money and time are lost to the shipping and traveling public through being compelled to use those circuitous routes and to pay rates and fares based on the distances thereover.

5. Opportunity is lost for effecting largely increased economy and efficiency in handling the lumber of the Willamette Valley moving to eastern destinations.

6. The products of Oregon in considerable part are subjected to excessive and unreasonable delay in reaching the principal seaports and consuming markets of the State.

7. The severity of car shortages in Oregon recurring periodically in the past and the losses therefrom suffered by shippers have been augmented needlessly and unreasonably, and so will continue to be, until the extension of lines herein sought shall have been made.

8. Interior Oregon is denied the benefits of reasonable competition between the defendants in the matter of the service and facilities of transportation due to be accorded by them and is deprived of adequate outlets for its products to markets in California and in western Oregon.

VI. The construction and operation of a line of railroad from Crane or Harriman westward to a connection with the Southern Pacific Company's rails at Crescent Lake or some point near thereto and the establishment between defendants and the projected line of railroad of through routes and joint rates and divisions
62a thereof are necessary and desirable in the public interest, and such joint and common use of the projected line should be prescribed as may be just and reasonable and as will afford adequate service and will maintain and assure maximum competition and the most efficient use of cars, equipment, and facilities. The extension sought herein is reasonably required in the interest of public convenience and necessity and the expense involved therein will not impair the ability of the defendants or any of them to perform their duty to the public.

VII. This proceeding is commenced under provisions of paragraphs (21) and (4) of section 1, of paragraph (3) of section 15, and of paragraphs (3) and (4) of section 15a of the interstate commerce act.

VIII. By reason of the facts herein stated the defendants unlawfully and in violation of sections 1, 15, and 15a of the interstate commerce act have failed and refused and still fail and refuse to give due consideration to the transportation needs of the State of Oregon and to the necessity under honest, efficient, and economical management of enlarging their existing transportation facilities in order to provide the people of the State of Oregon with adequate transportation and to that end to extend their lines and to operate the same substantially as demanded herein.

Wherefore, complainant prays that defendants may be severally required to answer the charges herein; that after due hearing and investigation an order be made commanding the defendants and each

of them to cease and desist from the aforesaid violations of said act and requiring some one or more of them to extend and construct a line of railroad between Crane or Harriman, Oregon, on the east and Crescent Lake or some adjacent point on the line of the Southern Pacific Company on the west and commanding defendants to establish and maintain just and reasonable through routes and joint rates with such extension and just and reasonable divisions of such joint rates and just and reasonable terms and conditions under which such through routes shall be operated; and that such other and further orders or requirements be made as the commission may consider proper in the premises.

PUBLIC SERVICE COMMISSION OF OREGON.
By LOUIS E. BEAN,
EDWARD OSTRANDER,
HYLEN H. COREY,
Commissioners.

I. H. VAN WINKLE,
Attorney General for State of Oregon, Salem, Oregon,
JOSEPH N. TEAL,
1016 Spalding Building, Portland, Oregon,
WILLIAM C. MCCULLOCH,
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Salem, Oregon,
Attorneys for Public Service Commission of Oregon.

MAY 14, 1927.

63a *Exhibit B to petition*

Before Interstate Commerce Commission

[159 I. C. C.]

No. 19680

PUBLIC SERVICE COMMISSION OF OREGON
v.
CENTRAL PACIFIC RAILWAY COMPANY ET AL.

Submitted October 30, 1929. Decided December 3, 1929

The construction of a rail-line extension between Crane, Oreg., and a connection with the Southern Pacific at or near Crescent Lake, Oreg., by the Oregon-Washington Railroad & Navigation Company is reasonably required in the interest of public convenience and necessity, and the expense involved therein will not impair the ability of the carrier to perform its duty to the public. Construction of extension required

William P. Ellis and William C. McCulloch for complainant and certain interveners.

Ben C. Dey and Guy V. Shoup, for Central Pacific Railway Company and Southern Pacific Company; J. M. Souby, F. J. Betz, and A. C. Spencer for Oregon-Washington Railroad & Navigation Company, Des Chutes Railroad Company, Oregon Short Line Railroad Company, and Union Pacific Railroad Company; Chas. A. Hart, Charles E. McCulloch, and Carey & Kerr, for Spokane, Portland & Seattle Railway Company, Oregon Trunk Railway, Oregon Electric Railway Company, Great Northern Railway Company, and Northern Pacific Railway Company, defendants.

J. M. Thompson and Samuel L. Newton for Public Utilities Commission of Idaho; H. H. DeArmond for city of Bend, Oreg., and Chamber of Commerce of Bend, Oreg.; L. M. Bechtell and A. R. Bowman for city of Prineville, Oreg., Crook County, Oreg., and Prineville Business Men's Club; Robert M. Duncan for Harney County, Grant County, Malheur County, Oreg., Ontario Chamber of Commerce, and Burns Chamber of Commerce; James T. Chinnock and J. R. Harvey for Grants Pass Chamber of Commerce and city of Grants Pass, interveners.

Report of the Commission

McManamy, Commissioner:

By complaint filed May 24, 1927, the Public Service Commission of Oregon, acting for the people of the State, alleges, in substance, that defendant carriers have failed and refused to provide reasonable and adequate facilities of transportation by railroad to a large area within the State of Oregon and that such facilities are reasonably required in the interest of public convenience and necessity, and that the expense of providing such facilities will not impair defendants' ability to perform their duty to the public.

Defendant carriers in this proceeding are Central Pacific Railway Company, Des Chutes Railroad Company, Great Northern Railway Company, Northern Pacific Railway Company, Oregon Electric Railway Company, Oregon Short Line Railroad Company, Oregon Trunk Railway, Oregon-Washington Railroad & Navigation Company, Southern Pacific Company, Spokane, Portland & Seattle Railway Company, and Union Pacific Railroad Company.

We are asked to require one or more of defendant carriers to extend and construct a line of railroad between Lawen, a point near Crane, Oreg., on the east, and Crescent Lake, or some adjacent point, on the line of the Southern Pacific Company, on the west. We are also asked to require defendant carriers to establish, operate, and maintain just and reasonable through routes and joint rates with such extension, to prescribe reasonable terms and conditions under which such through routes shall be operated, and to require such common use of the extension as may be reasonable and necessary in the public interest.

Various Oregon municipalities and commercial organizations, and the Public Utilities Commission of Idaho intervened and were heard in support of the complaint.

For convenience the Central Pacific Railway and the Southern Pacific Company are referred to jointly herein as the Southern Pacific; the Oregon-Washington Railroad & Navigation Company as the O.-W. R. & N. and the Oregon Short Line Railroad as the Oregon Short Line; the Union Pacific Railroad as the Union Pacific. The Des Chutes Railroad, Oregon Short Line, O.-W. R. & N., and the Union Pacific are referred to jointly herein as the Union Pacific lines, and the Great Northern Railway as the Great Northern. Unless otherwise stated, all points and counties named are within the State of Oregon.

In their answers to the complaint defendants aver that there is no public necessity, interest, or convenience to be served by the requested construction, and that there is no authority in law for the granting of the relief prayed for. They urge that if paragraph 21, of section 1, of the interstate commerce act, or any other provision thereof, be construed as conferring upon us authority to require defendants, or either of them, to construct, or join in the construction and operation of the requested extension, such provisions are unconstitutional in that the same would operate to deprive them of their property without due process of law, and take from them their private property for public use without just compensation, in violation of the fifth amendment to the Constitution.

Substantially the same general issues were before us in Construction of Lines in Eastern Oregon (111 I. C. C. 3), decided May 3, 1926, hereinafter referred to as the Oregon case. In that report a number of applications by carriers for certificates of public convenience and necessity, dealing with other construction and arrangements in this territory, were also disposed of. In dismissing the complaint, we said that the record in the Oregon case could not be depended upon to speak clearly as to future traffic and its financial results, because of conditions changed since that record was made. Subsequently a petition was filed by complainant asking us to reopen the proceeding in order that opportunity might be afforded to present new evidence as to the proposed line between Harriman and Odell. In denying the petition we said that if, after considering our views as to the disposition of the finance dockets, the Oregon commission desired to urge the building of the Harriman-Odell line, a new complaint with that object might be filed. (Construction of Lines in Eastern Oregon, 117 I. C. C. 737, 741.) Further changes in the transportation facilities in this territory were considered and authorized in Construction by O., C. & E. Ry. (138 I. C. C. 99).

The issues in this case are deserving of the most careful consideration. A line of railroad across central Oregon has long been the desire of her people and they have hopefully looked forward to the construction of such a line. The accompanying map shows the vast

area within the State which is without rail facilities. The area probably constitutes the largest area within the United States which is without rail facilities.

The necessity for the construction must be viewed in the light of conditions as they are reflected by the present record. Two principal questions are presented, first, as to our authority to require such construction, and second, whether the facts of record are sufficient to justify the exercise of that authority if such has been vested in this commission.

Paragraph 21, of section 1, of the interstate commerce act provides, in part, that:

"The commission may, after hearing, in a proceeding upon complaint or upon its own initiative without complaint, authorize or require by order any carrier by railroad subject to this act, party to such proceeding, to provide itself with safe and adequate facilities for performing as a common carrier its car service as that term is used in this act, and to extend its line or lines: Provided, That no such authorization or order shall be made unless the commission finds, as to such extension, that it is reasonably required in the interest of public convenience and necessity, or as to such extension or facilities that the expense involved therein will not impair the ability of the carrier to perform its duty to the public."

It is not our province to pass upon the constitutionality of statutes enacted by Congress. (Telephone and Railroad Depreciation Charges, 118 I. C. C. 295, 326; Interchangeable Mileage Ticket Investigation, 77 I. C. C. 200, 202.) We are an administrative body which may not presume to annul by interpretation an act of the Federal Legislature. (In the Matter of Pipe Lines, 24 I. C. C. 1, 4.) The primary rule of statutory construction is to give effect to the intention of the legislature. Whenever that is apparent it dominates and interprets the language used. (Rodgers v. United States, 185 U. S. 83, 86.) This paragraph empowers us to authorize or require a carrier subject to the act to extend its line or lines. (Alabama & V. Ry. Co. v. Jackson & E. Ry. Co., 271 U. S. 244.) The transportation act, which added this paragraph to section 1, seeks affirmatively to build up a system of railways prepared to handle promptly all interstate traffic, and earnings enough to maintain their properties and equipment in such a state of efficiency as to carry this burden. To achieve this purpose it puts the railroad system more completely than ever under the fostering guardianship and control of this commission, which is to supervise their joint use of terminals, their construction of new lines, their abandonment of old lines, and secure a fair return upon the properties of the carriers engaged. (Dayton-Goose Creek R. Co. v. United States, 263 U. S. 456, Railroad Comm. of California v. Southern Pacific Co., 264 U. S. 331.)

This paragraph plainly empowers us to authorize or require a carrier subject to the act to extend its line or lines. Defendants by construction endeavor to restrict our power to comparatively short

RAILROADS INVOLVED IN
—PROPOSED EXTENSION—
—DOCKET No. 19680—
LEGEND:
EXTENSION PROPOSED BY THE OREGON COMMISSION
ALTERNATE ROUTE OF SOUTHERN PACIFIC NOW UNDER CONSTRUCTION
EXISTING LINES OF RAILROAD
MONTANA
WYOMING
COLORADO
UTAH
NEVADA
IDAHO
OREGON
CALIFORNIA
PROPOSED EXTENSION
ALTURAS CUT-OFF
OCEAN
PACIFIC

extensions in territory already served by the carrier or carriers involved. There is not the slightest foundation in the language of Congress for such a limitation. The language is so clear and its meaning so plain that no difficulty attends its construction. Adherence to its terms leads to nothing impossible or plainly unreasonable. We are therefore bound by the words employed and are not at liberty to conjure up conditions to raise doubts in order that resort may be had to construction. It is elementary that where no ambiguity exists there is no room for construction. Compare United States v. Missouri P. R. Co. (278 U. S. 269).

We find that authority has been vested in us to authorize or require the construction prayed for if the conditions set out in the statute are satisfied and the facts otherwise warrant the construction.

Two conditions must be satisfied before the issuance of an order requiring the construction, (1) that the extension is reasonably required in the interest of public convenience and necessity, and (2) that the expense involved will not impair the ability of the carrier or carriers involved to perform their duty to the public. (Construction of Lines in Eastern Oregon, 111 I. C. C. 3; Los Angeles Passenger Terminal Cases, 142 I. C. C. 489; Gunderson v. Chicago, M. & St. P. Ry. Co., 91 I. C. C. 702; Cooke v. Chicago, B. & Q. R. Co., 66 I. C. C. 452; Ridge Coal Mining Co. v. Missouri Pac. R. Co., 62 I. C. C. 259.)

The view of the Public Service Commission of Oregon, as expressed by two members thereof, is that the development of central and western Oregon is being seriously hampered due to the absence of an east-and-west line of railroad across the State. Traffic now originating in western Oregon and destined to eastern points must move either south to Roseville, Calif., or north to Portland Oreg., before the eastward movement in reality begins. Similar movement is experienced on traffic originating in eastern Oregon and southwestern Idaho, destined to California points and to points in southwestern Oregon. The resulting longer haul and greater time consumed renders it impossible to ship certain commodities of a perishable nature to what would be available markets if the shorter routes to be provided by the proposed extension were available. Present routes which are termed unduly circuitous have similar effect on the marketing of agricultural products, livestock, and lumber.

It is urged that Oregon's development, as compared with other States, has been held back and seriously hampered, due to the lack of direct routes to the markets for her products and that the construction of the proposed extension is an important part of anticipated development of adequate rail transportation facilities within the State. The evidence of complainant and defendants brings out clearly and forcibly that no section can develop without transportation. The major portion of the State of Oregon is without adequate transportation facilities and this is particularly true with

respect to the portion which would be served by the proposed construction. The Oregon commission points to the fact that the proposed construction is not a new idea, but would in reality be a partial completion of a program of rail construction started by the Union Pacific lines many years ago. The events leading up to the cessation of this construction work are fully set forth in the Oregon case, supra, and it is unnecessary to repeat them here. It is sufficient to say that the location of the extension as proposed by the Oregon commission follows the original survey of the Union Pacific and would connect what is now in effect a branch line from Ontario to Burns, Oreg., with the so-called Natron cut-off of the Southern Pacific, which is what was contemplated when the construction was first extended west from Ontario.

The principal existing rail lines and those under construction in this territory, as well as the proposed extension, are shown by the accompanying map. The proposed line would leave the present Ontario-Burns branch of the O.-W. R. & N. at Lawen, near Crane, and extend westward to a point on the Cascade line of the Southern Pacific at or near Crescent Lake, a distance of approximately 185 miles. The proposed extension would cross, approximately 21 miles east of Crescent Lake, the recently constructed line of the Great Northern running from Bend to a connection with the Southern Pacific at Chemult.

It will be observed that the proposed extension would connect directly with the Southern Pacific, Great Northern, and O.-W. R. & N. The O.-W. R. & N. is a part of the Union Pacific system. The latter system embraces the Union Pacific Railroad, Oregon Short Line, O.-W. R. & N., and the Los Angeles & Salt Lake Railroad. On December 31, 1927, all of the stock, except 15 shares, of the O.-W. R. & N. was held by the Oregon Short Line. All of the stock of the Oregon Short Line was held by the Union Pacific. The directors of the Union Pacific are, with two exceptions, also directors of the Oregon Short Line and O.-W. R. & N. These companies have the same president. The Union Pacific, Oregon Short Line, and the O.-W. R. & N. are parties in this proceeding and in view of the relation shown above they must for practical purposes be considered together. While the Ontario-Burns branch is held by the O.-W. R. & N., it is entirely separated therefrom and connects with and is operated under lease by the Oregon Short Line. This branch is in reality owned by the Union Pacific through the ownership of the Oregon Short Line and, in turn, the ownership of the O.-W. R. & N. by the Oregon Short Line. Only in the most technical sense could an extension of the Ontario-Burns branch to Crescent Lake be considered an extension of the O.-W. R. & N. apart from the Oregon Short Line and the Union Pacific Railroad.

The Ontario-Burns branch extends from Ontario to Crane, a distance of approximately 127 miles, and from Crane to Burns a distance of approximately 30 miles. The construction to Crane was

completed in 1916. The extension from Crane to Burns was completed in 1924 and was constructed primarily to reach lumber-mill operations at Burns.

One essential distinction between this case and that before us in the Oregon case, supra, is that in the latter case the Oregon commission was seeking the construction of a line from Crane to a connection with the Southern Pacific and joint or common use of the line of the Southern Pacific between Eugene and Klamath Falls, while here the issue is confined to construction of a line from Crane to a connection with the Southern Pacific.

The requests of the Oregon commission and the interveners in the present case are not directed to any particular carrier, but the general thought expressed upon the record is that the proposed line should be built by the O.-W. R. & N. Much of the testimony is based upon the assumption that the extension is to be built by the O.-W. R. & N. The feeling that the proposed extension should be built by the O.-W. R. & N. is associated with the thought that the great need of the State of Oregon is additional east and west railroads.

GENERAL DESCRIPTION OF THE TERRITORY

For the greater part of the distance between Ontario and Crane the present line follows the Malheur River and passes through Malheur Canyon. Proceeding west from Crane somewhat swampy areas are encountered for a distance of approximately 20 miles in the vicinity of Malheur Lake. The area included in the next 15 miles is referred to as alkali flats where the topsoil has been blown into sand ridges. A limited area west of this portion contains considerable grassland and some land capable of reclamation and cultivation. The succeeding area for a distance estimated from 75 to 115 miles is a rolling country with an altitude varying from 3,500 feet to approximately 4,500 feet. This area approaches the foothills of the Cascades and the timbered area of the Paulina National Forest through which the extension would pass for the remaining portion of the distance to Crescent Lake.

The area along the proposed line is sparsely settled. It is said that when the original survey was made through this section prior to 1912 many homesteads were taken up but these were largely abandoned after it was determined that the line would not be built.

There is some difference of opinion as to the nature of the soil in several portions of the area which would be tributary to the proposed line. The annual rainfall in the area to be traversed by the line is less than 14 inches. With the exception of mountainous areas the snowfall is not very great in this territory.

While witnesses for defendants had considerable to say at the hearing with respect to the unproductiveness of central Oregon this section was described as follows in a publication by the Southern Pacific for general information of the public:

"CENTRAL OREGON: This rich and productive district was formerly called desert country. The rainfall averages from 10 to 12 inches, so that in some places it is necessary to irrigate the rich volcanic ash soil to secure good crops. Alfalfa, grain, and all root crops are grown successfully. Dairying and poultry raising are important industries. Where dry farming methods are carried on intelligently, fair crops of grain are produced. The elevation of Central Oregon varies from about 2,500 to 4,750 feet. It is a district of abundant sunshine, and where irrigation is not practiced the traveler will see vast stretches of sagebrush, the home of countless jackrabbits. Stock raising is one of the principal industries of this region. There is a large amount of Government land and State school land in central Oregon, but it is a country with few railroads, and settlers in many districts are few and far between. Branch experiment stations at Moro and Burns serve the settlers in recommending approved varieties of seed grain, method of dry land tillage and other farm practices."

The basic resources of the territory which would be affected by the proposed line are lumber, grain, livestock, farm products, dairy products, and fruits. This statement includes the western portion of Oregon and southwestern Idaho as well as the territory along the extension. These will later be considered in detail.

IRRIGATION PROJECTS

As is true in many Western States the matter of water supply in the territory to be served directly or indirectly by the proposed line is one of the most important governing factors in agricultural development. Several irrigation projects have been undertaken with varying degrees of success. These projects represent large investments, partly by the Federal Government. Some difference of opinion is expressed as to the practicability of some of these projects and as to the areas which can actually be irrigated. The irrigation projects include those in southwestern Idaho. Difficulty has been experienced in the financing of some of the projects in Oregon, and this has retarded development, but it appears that the projects have real merit and that the difficulty is due to the manner in which financial matters were handled. This financial situation is under investigation by State authorities and, as stated by the Governor of the State of Oregon amicable adjustment and subsequent development is expected. In addition to irrigated lands there is considerable land in this territory which can be dry farmed so as to produce certain crops.

MARKETS

One of the principal results which complainant and interveners urge would follow the proposed construction is the widening of available markets for the products of several sections. Southwestern

Idaho products could be moved by this route to northern California points, including San Francisco and adjacent points. Diversion privileges to Portland and points north thereof would also be available at Crescent Lake. The same result would follow as to the movement from northern California points to southwestern Idaho points.

Products of western Oregon would have a shorter route to the East and other sections of Oregon would have more direct rail connection with central Oregon. It is urged that present routes from western Oregon, particularly Portland, into central Oregon are unduly circuitous and that this would be overcome by the proposed construction.

ROUTING OF TRAFFIC

The distances between various originating and destination points, the routes presently available, and the extent to which shippers utilize the various open routes has an important place in the record. Between numerous points the proposed route would be shorter than existing routes, the difference varying considerably between different points.

TRAFFIC ESTIMATES OF COMPLAINANT AND INTERVENERS

Painstaking estimates as to the amount of traffic potentially and probably available have been made and submitted by the parties. In important instances they are in conflict, which can only be reconciled by remembering that they are estimates, with many problematical factors and variables upon which judgments may well differ.

It is urged that the development within the State as a whole which would follow this construction would more than compensate for the loss of traffic by existing facilities and that ultimately both the existing and proposed facilities would enjoy increased traffic. It is urged also that while present facilities in the Willamette Valley are sufficient to meet the needs of that section, the development which would follow the proposed construction would result in all-rail facilities within the State enjoying increased traffic.

In considering the statement that present facilities in the Willamette Valley are sufficient to meet the needs of that section it should be noted that the area of that valley constitutes less than 3 per cent of the area of the State. The Umpqua and Rogue River Valleys are also west of the Cascade Mountains. The latter valleys are very fertile and productive, yet they are not adequately served.

The estimates of available and potential traffic are given as to counties and will be so separated in the consideration which follows.

Estimates were submitted, on behalf of complainant and interveners, by a representative of the Oregon Agricultural College and United States Department of Agriculture, of the probable tonnage which will be made available for movement by reason of the agricultural development which will follow the construction of the

proposed extension. Estimates were also submitted of the portion of present tonnage of agricultural products, including livestock, which would move westbound over the proposed extension instead of existing routes. These estimates of tonnage per annum are summarized in the following tabulation.

Summary of agricultural tonnage by counties

County	Available now		Additional within five years		Additional after five years		Grand total	
	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars
Malheur	23,050	1,241	11,531	689	64,357	3,274	98,938	5,174
Harney	8,801	650	3,700	144	20,335	789	32,836	1,583
Northern Lake	2,376	213	1,752	79	15,777	726	19,905	1,018
Klamath	493	44	240	16			733	60
Deschutes, Crook, Jefferson, Wheeler	3,487	352	250	15			3,737	367
Grant	1,944	159	486	40			2,430	199
Baker	500	33					500	33
Lane	25,984	1,018	18,778	674			44,762	1,692
Douglas	15,647	969	7,420	549			23,067	1,518
Linn	7,321	324	1,519	59			8,840	383
Benton	5,272	239	591	28			5,863	267
Lincoln	1,752	116	1,278	84			3,030	200
Coos and Curry	9,551	572	6,600	469			16,151	1,051
Total	106,178	5,928	54,145	2,826	100,469	4,789	260,792	13,543
Deductions [1]							37,205	1,902
Net grand total							223,587	11,641

[1] Deducting hay and feed requirements of western Oregon figures as originating in Malheur, Harney, and Lake Counties.

These estimates include the tonnage which it is anticipated will follow the completion of four irrigation and reclamation projects now in progress. New lands are to be developed by these projects and additional water furnished for old lands. The Owyhee project will reclaim approximately 80,960 acres; Vale project 24,700 acres; Jordan Valley project 9,500 acres; and the Warm Spring project 4,000 acres. The first two projects are by the Federal Government and the latter two by the State. All are located in eastern Oregon. When completed the Owyhee and Vale projects will represent an expenditure of approximately $20,991,505.

The estimated tonnage consists of beef cattle, sheep, lambs, hogs, horses, butter, potatoes, wheat, alfalfa, barley, oats, wool, fruits, dairy products, and miscellaneous products. No tonnage is included in the estimates which may follow irrigation by pumping although this was regarded by the witness as both a practical and probable method of irrigation and reclamation. The estimates do not include any tonnage which might originate on and move over the extension.

The available tonnage is that which it is considered will move over the proposed route after giving consideration to origin points, rates, mileage, and markets. In this study it is assumed that these commodities would be transported over the most direct routes and so

routed by the shippers. Shipments of broccoli originating in Douglas County on the line of the Southern Pacific are now routed by the shippers to Portland via Southern Pacific and then east over the Union Pacific lines. Similar routing over the proposed line is anticipated for the commodities and tonnage shown. The estimates are predicated upon the thought that for this amount of traffic the proposed line will afford the most direct and shortest route between origin and destination points and that this service will be of such value to shippers that they will exercise their privilege and route their shipments over this route. It is conceded, however, that the Southern Pacific may be able to control or influence the routing so that some of the anticipated tonnage for the proposed line may not be realized.

In regard to anticipated shipments of hay from Malheur County to the Coos Bay section it is conceded that for several years transportation of this hay has been embargoed, due to weevil. Research is being conducted with a view to eliminating this condition. When the alfalfa hay is converted to "meal" the weevil is destroyed and some quantities of this feed are shipped. Experiments are also being conducted to determine whether the weevil will live in the low altitude of western Oregon. If it is found that it will not this will probably result in lifting the present embargo. Harney County hay is not subject to the weevil.

It is anticipated that large quantities of perishable commodities going east from western Oregon will move over the proposed line to the present line of the Oregon Short Line and there be combined with special perishable trains which are given expedited movement.

The estimated tonnage shown for Lake and Harney Counties cover the so-called high-desert area.

It is anticipated that the Owyhee and Vale and other irrigation projects now under development will bring approximately 1,500 families to this territory. Practically all present irrigated lands are being utilized in the production of various commodities and livestock.

TIMBER

Oregon contains one-sixth of the standing timber in the United States. The territory through which the proposed railway would run is not primarily a timbered country, but there are very considerable stands of timber which could be opened up following the construction of this line. This timber is mature and will deteriorate rapidly. Harvesting of timber without transportation is impossible. In commenting on the standing timber in this area we said, in the *Oregon case*, at page 24:

"Of the 50,000,000,000 feet assigned to the territory east of the Cascades, the principal tracts are in the Klamath Basin and in the territories tributary to Lakeview and Bend. The testimony as to the

amounts in these several territories is conflicting, but according to the record as a whole the amount that may be considered tributary to Klamath Falls is approximately 24,000,000,000 feet, tributary to Lakeview about 3,000,000,000 feet, and tributary to the Deschutes River lines about 14,000,000,000 feet. There are other forests in eastern Oregon which have resources considerable in themselves, but relatively small as compared with the tracts in the western half of the State to which reference has been made. These figures do not include about 5,500,000,000 feet south of Oregon tributary to the proposed lines. *The entire eastern slope of the Cascade Mountains reaching to Lakeview on the south, is heavily timbered, and large stands would be tributary to the eastern end of the cross-State line.* Any additional traffic to or from territory on the south or over the Cascades on the west would have to be interchanged with the road operating the Natron cut-off, in the absence of arrangements for through movement. *Both in this section of the proposed cross-State line and the Natron cut-off, while partly in mountainous territory, are capable of originating considerable traffic in forest products.*" (Italics ours.)

HARNEY COUNTY.—While the lumber in northern Harney County is provided with transportation by the railway line to Burns, the circuitous route which must be followed in order to reach a market, either in California or via water transportation from Portland, is sufficient to discourage development there. The construction of the proposed extension will shorten the route to the tidewater at Portland by 183 miles and also open the California market to the lumber manufactured in northern Harney County.

CROOK, WHEELER, AND GRANT COUNTIES.—The timber in the Ochoco National Forest as well as the privately owned timber in eastern and southeastern Crook County, southeastern Wheeler County, and southwestern Grant County, will be found tributary to the proposed line.

KLAMATH COUNTY.—The timber in the Weschutes National Forest as well as the privately owned timber in northern Klamath County while tributary in part to the Southern Pacific and the Great Northern will be served in part by the proposed railway line.

It is impossible to determine exactly the quantity of timber in these areas. The following is an estimate applying to the National forests:

	Feet
Harney County (Malheur National Forest)	2,000,000,000
Crook, Wheeler, Grant Counties (Ochoco National Forest)	3,886,000,000
Klamath County (Deschutes National Forest)	2,513,000,000
Total	8,401,000,000

This estimate applies only to national-forest timber in that section of each county which appears to be tributary to the proposed railway line. There are large stands of privately owned timber in Crook,

Wheeler, Grant, and Klamath Counties. That portion of the privately owned timber in these counties which is contiguous to the national-forest timber which is tributary to the proposed extension will, of course, be tributary to that line. No estimate of the stands of privately owned timber are available.

MALHEUR COUNTY

Evidence relating particularly to present and prospective development of Malheur County was presented by the county agricultural agent on behalf of the court of that county. The area of the county is 9,883 square miles and 484,820 acres are being farmed by 1,331 farmers. Of the latter acreage 122,500 is under irrigation. The soil of this county is said to be very fertile as reflected by the statement below.

Crop	Number of yields averaged	Per acre yields		Average yield per acre
		Low	High	
Wheat	66	14 bushels	76 bushels	41.9 bushels.
Barley	35	15 bushels	80 bushels	48.1 bushels.
Oats	23	16.6 bushels	90 bushels	56.6 bushels.
Corn	40	25 bushels	do	59.7 bushels.
Alfalfa hay	61	1.4 tons	8.4 tons	5.1 tons.
Clover hay	7	1 ton	4.1 tons	2.4 tons.
Clover seed	12	3.3 bushels	8 bushels	5.4 bushels.
Potatoes	13	110 bushels	476.6 bushels	270.5 bushels.
Onions	4	125 sacks	425 sacks	268.7 sacks.
Apples	9	100 bushels	500 bushels	277 bushels.

Approximately half of the agricultural income of the county is from livestock and livestock products. Dairying is also carried on extensively. Extensive further development is possible through present and prospective irrigation and reclamation projects.

The present agricultural production of this county is estimated as set out below, based on 1927 shipments.

	Carloads		Carloads
Beef cattle	384	Barley	32
Sheep	736	Potatoes	141
Hogs	98	Onions	47
Dairy cattle	33	Prunes, green	138
Horses	28	Apples	565
Wheat	279	Seed	21

Although a considerable number of cattle have in the past been driven to Winnemucca, Nev., and there loaded for rail movement to San Francisco Bay points, this is unprofitable and impracticable to continue.

The thought of the witness was that the estimates previously referred to of the tonnage and production of Malheur County are too conservative to be representative and reflect the real situation. The same thought is expressed by witness testifying with respect to Lake and Harney Counties.

LAKE COUNTY

Large stands of timber are located within this county. The standing timber is estimated at 14 billion feet, of which 6 billion are in the national forest reserves. It is estimated that this timber will provide for the proposed line 2,000 carload shipments annually for a period of 50 years.

It is said that many years ago, when the line across the State was first surveyed, several hundred homesteaders settled in this section, but due partially to lack of transportation they had abandoned their claims, although many had built substantial homes.

Sections of this county have wells from which large quantities of water are pumped for irrigation and domestic purposes. Several illustrations are given and photographs submitted to show that splendid agricultural crops are being produced within this area. In other sections dry farming is said to be practicable. Rapid development is taking place in production of pasture feeds such as clover.

In a pamphlet issued by the Southern Pacific the following is included relative to Lake County:

Lake County is in South Central Oregon on the east side of the Cascade Mountains. This county is larger than the State of New Jersey and in it there are a large number of easily accessible homesteads open to entry. It contains 7,920 square miles and has but fourteen miles of railroad within the county. The county has a population of slightly more than 5,000 or about seven-tenths of a person to each square mile. Numerous lakes, most of them being at an elevation of more than four thousand feet, beautify the entire region. The county is rich in minerals, the soda deposit at Alkali Lake being 99 per cent pure. Stock raising, lumbering, and farming are the principal industries. Considerable fruit is raised in parts of the county."

HARNEY COUNTY

Although dry farming has been practically abandoned in this county, due partly to lack of transportation by which to get products to market at reasonable cost, this method would be used substantially if the proposed line is constructed.

During 1923 a total of 234 cars of cattle, 168 cars of sheep, 24 cars of wool, 11 cars of hogs, and 8 cars of horses were shipped from Crane. During the same year 15,000 head of cattle were driven overland to Winnemucca, Nev., and there loaded for rail shipment to San Francisco; also 2,000 head were driven to Klamath Falls. The distance from Harney County to Winnemucca, over which these cattle were driven is about 250 miles and driving cattle for this distance is regarded as unprofitable.

Harney County also has some mineral resources, but these are not relied on in estimating the probable earnings of the proposed line.

Although livestock is the principal industry in this county, there is much farming.

ALKALI LAKE

Alkali Lake, so called, lies approximately 20 miles south of the proposed line. It is estimated there are 3,000,000 tons of soda to be moved from this lake. This lake contains immense quantities of natural and pure sodium carbonate, which is used in many industries. It can be dried and is then ready for use without expensive chemical operations necessary in other operations or deposits of the country. There is great demand for this commodity and only transportation is lacking in the development of this resource. It is estimated that the possible production would amount to 25 cars per day and that the movement at the start would be from 2 to 5 cars daily.

In referring to mineral deposits in Lake County a pamphlet published and distributed by the Union Pacific system includes the following:

"There are also large deposits of minerals in this county, the most important of which lie in the northeastern part of the county near Alkali Lake. At the present time it is estimated that there are 800,000 tons of 99 per cent pure soda in these deposits."

UMPQUA AND ROGUE RIVER VALLEYS

These valleys are located in southwestern Oregon south of the Willamette Valley. According to the Southern Pacific, the valley of the Rogue comprises an approximate area of 2,300 square miles, of which there are over 500 square miles of rich valley floor and gentle hill slope. The soil of the valley is largely alluvial but also to be found is disintegrated lava and a soil of granite formation. Much of the soil is black and deep, with some lighter colored soil formed of disintegrated granite. The soil is ideal for strawberries and loganberries. The Rogue River Valley is best known for its pears, apples, and peaches, particularly pears.

North of the Rogue River lies the Umpqua Valley. This is really a succession of small and fertile valleys. The soil of the valleys is deep and sandy loam. On the benches and uplands the soil is of reddish clay. There is also a black adobe soil extremely rich in plant foods but difficult to work except at the right time. Yet this daobe soil produces a heavy yield of vegetables and from it come some of the best apples and pears produced in the Umpqua Valley. There are about 3,000 square miles of land in the Umpqua Valley.

Quicker transportation and shorter routes would be of much advantage in the transportation and marketing of the products of these valleys. A large part of the movement is under refrigeration and to eastern markets. The proposed construction would afford a shorter and more direct route from this territory to the east.

COOS BAY TERRITORY

Much importance is placed by complainants and interveners upon prospective through traffic originating in and destined to Coos and Curry Counties which would move over the proposed line. Coos County embraces Coos Bay and much importance is attached to the relation of the proposed line to the development of this port.

Lumber and lumber products furnish the principal traffic from these counties, although there is some traffic furnished through agricultural, dairying, and fishing activities. The estimates of the tonnage which might be expected from the agricultural development are embraced in the statement included above.

The harbor at Coos Bay is said to be the most improved port between Portland and San Francisco. The Federal Government has, since 1890, spent approximately $6,000,000 and the State approximately $1,000,000 in its development. Approximately $3,250,000 has been spent by the Federal Government during the past four years. There are no vessels running regularly into this port. A total of 264 foreign and Atlantic coast vessels cleared the port during the period 1922 to 1927 and carried approximately 497,000,000 board feet of logs and lumber. Tonnage for the port can not now be developed, because vessels now loading there must complete loading at some other port, due to present depth of the channel. It is proposed to remedy the latter difficulty but appropriations for the work have not as yet been made.

The Southern Pacific now has a branch line extending to Coos Bay but Curry County has no rail facilities. This branch has been in operation since 1916 but has never enjoyed sufficient traffic to utilize the facilities to anything like capacity.

The hope of witnesses representing this territory is that if the Union Pacific constructs the extension to Crescent Lake, it would through common user with the Southern Pacific, or its own construction, eventually extend its service west of the Cascade Mountains to Coos Bay, to the Rogue, Umpqua, and Willamette Valleys and adjacent territories. With this accomplished and with resulting competition and direct and shorter routes to and from the East, increased development is expected. The feeling exists that the territory and the port can not be developed until it is served by more than one railroad and by lines running in more than one direction.

High-grade lumber shipments by rail from Coos Bay territory and consisting principally of cedar, fir, and hemlock are given as follows:

	Carloads
1922	806
1923	2,011
1924	1,904
1925	2,800
1926	2,456

The bulk of these shipments, or about 80 per cent, went east to Chicago and Mississippi River territory. There is also considerable production amounting to several hundred cars annually of high-grade lumber products including battery separators, veneer products, and novelties. The bulk of green-lumber shipments are by water transportation. The standing timber ready to cut in Coos County is estimated at 30 billion feet, with a somewhat less amount in Curry County.

Central Oregon is capable of producing large quantities of hay and other feeds. Much of the acreage in Coos and Curry Counties is now devoted to producing hay and feeds for dairy cows. It is felt by representatives of that section that if means were provided by the proposed construction for direct movement of these feeds into the Coos Bay country the acreage therein now devoted to producing such feeds could be devoted to pasture and many more dairy cows maintained and the production of dairy products greatly increased.

Evidence was offered on behalf of the Chamber of Commerce of Portland tending to show that the development of Oregon is being held back due to the absence of adequate transportation and that the proposed construction would materially assist in remedying this condition.

The following statement reflects the development with respect to farms during the period 1920 to 1925, and was offered as showing that development is practically at a standstill.

County	Area in square miles	Population, U. S. Census, 1920	Number and average acreage, farms		Total farm area	Total area in acres	Per cent in farms	
			Farms	Acreage			1925	1920
Malheur	9,883	10,907	1,330	364	484,800	6,325,120	7.7	7.4
Harney	9,933	3,992	681	1,102	689,338	6,357,120	10.8	8.3
Grant	4,520	5,496	591	1,265	758,948	2,892,800	26.2	26.0
Lake	7,920	3,991	478	1,014	484,676	5,068,800	9.6	10.4
Crook	2,934	3,424	561	817	448,316	1,877,760	23.9	29.6
Klamath	5,999	11,413	789	431	338,968	3,839,360	8.9	9.3
Deschutes	3,065	9,622	670	162	108,629	1,961,600	5.5	7.4

The number of farm owners decreased between 1920 and 1925 in Malheur County 89, Grant County 111, Lake County 65, Crook County 152, Klamath County 185, Deschutes County 83. There was an increase of 69 in the number of farm owners in Harney County during the same period.

On the basis that the line would serve territory extending 50 miles on each side thereof, the area which would benefit from the construction is summarized as follows: Harney County 7,000 square miles, Lake, Crook, and Deschutes Counties 4,900 square miles, Klamath County 800 square miles, total 12,700 square miles. The line would also render of increased benefit and value the present rail mileage in Malheur County.

Emphasis is placed upon the decrease in mileage between Portland and various trading centers in surrounding territory that would result from the proposed line. The greater development of the States of California and Washington as compared with Oregon is attributed by several witnesses to the greater development of rail transportation within the former States.

CAR SUPPLY

Severe car shortages have many times retarded industrial activity and development in the State of Oregon. The commercial prosperity of the State is so dependent upon the marketing of its products that it quickly responds to any slackening in movement. The conditions which bring about such situations and the results which follow were described in detail in our report in the Oregon case, *supra*, and it is not necessary to repeat them here. There we said, "The Natron cut-off will mitigate, but can not entirely avoid the recurrence of, conditions of this character." The construction of the proposed extension would greatly relieve car shortages by the avoidance of the long haul by present routes and by making available the supply of cars of the Union Pacific system.

SOUTHERN IDAHO

Data were submitted by the Public Service Commission of Idaho to show the advantage to shippers and receivers of freight in 10 of the counties in southwestern Idaho which would follow the construction of the proposed extension. The data relate principally to the traffic orignating in and destined to points in these counties and it is assumed that all of the present all-rail movement between these Idaho points and San Francisco, Calif., and points adjacent thereto, would be over the proposed extension and that more expedited and direct service would thereby be afforded. The distance to San Francisco would be shortened approximately 400 miles as compared with present routes. Included in the data are figures showing the number of carloads of various commodities originating and destined to points in these counties. Considerable importance is attached by the witnesses for this intervener to the development of roads within Idaho, the number of automobiles used thereon, and the expected replacement of worn-out automobiles by automobiles shipped into the territory from San Francisco. It is said that cars are shipped knocked down to assembling plants in California and there assembled and reshipped. It is anticipated that this traffic would move via the proposed extension.

The following summary shows the number of carloads of freight received by the O.-W. R. & N. at Huntington, Oreg., for westbound movement and the witness surmises that most of this movement is to coast points:

	Carloads
1921	31,610
1922	38,636
1923	38,575
1924	39,879
1925	39,675
1926	40,615
1927	42,276

The tonnage and number of carloads originating on the lines of the Oregon Short Line in Idaho during the period from 1913 to 1927 were as follows:

Year	Tonnage	Carloads	Year	Tonnage	Carloads
1914	441,630	(1)	1921	2,033,013	65,921
1915	(1)	(1)	1922	2,085,885	75,294
1916	1,463,827	(1)	1923	2,542,810	93,428
1917	1,889,756	(1)	1924	1,968,393	75,565
1918	2,220,003	(1)	1925	2,387,638	84,168
1919	2,172,522	(1)	1926	2,346,833	84,719
1920	2,402,941	77,215	1927	2,384,588	85,821

[1] Not available.

It is stated that San Francisco would provide a market for much of the dressed poultry, eggs, butter, and various other commodities produced in southwestern Idaho if adequate and expeditious rail service was provided.

The following shows the number of carloads originating in the 10 southwestern counties of Idaho during the period 1921 to 1927:

	Carloads
1922	12,604
1923	15,755
1924	10,890
1925	13,304
1926	12,934
1927	14,852
Total	93,355

These carloads consisted of the commodities shown in the following:

Commodity	1921	1922	1923	1924	1925	1926	1927	Total carloads
Barley	18	10	20	129	42	34	31	284
Corn	11	12	8	18	54	24	26	153
Oats	16	55	51	69	141	87	95	514
Wheat	1,055	1,207	529	525	921	1,546	1,105	6,888
Flour	358	487	425	412	350	459	581	3,072
Bran	89	82	55	75	67	135	92	595
Other mill products	31	35	42	27	76	16	31	260
Hay	865	504	610	409	350	207	476	3,421
Apples	3,749	2,242	4,497	2,054	4,479	3,431	4,909	25,361
Fruit, dried	29	32	38	41	18	34	50	242
Prunes	1,493	1,135	1,728	566	833	1,145	1,104	8,004
Canned goods	25	12	14	14	54	40	40	199
Potatoes	2,031	1,981	2,429	1,746	1,287	971	979	11,424
Other vegetables	291	761	865	463	562	417	578	3,937
Other green fruits	31	128	249	30	21	67		526
Cattle	1,251	1,084	1,511	1,514	1,507	1,463	1,394	9,724
Hogs	150	271	422	596	347	405	482	2,673
Horses and mules	69	81	111	120	107	122	135	745
Sheep	1,724	2,485	2,151	2,082	1,600	1,767	1,803	13,612
Eggs [1]					131	186	208	525
Poultry [1]					75	87	113	275
Butter [1]					275	281	348	904
Cheese [1]					7	8	2	17
Total	13,286	12,604	15,755	10,890	13,304	12,934	14,582	93,355

[1] No record for 1921 to 1924.

The destinations of the above shipments are not given but the witness felt that much of this traffic could be sold to better advantage at California points, especially San Francisco, and that the tonnage and output of these Idaho counties could be greatly increased if a more direct and shorter route was provided through the construction of the proposed line.

The record also shows that there is considerable movement of necessaries into these 10 southwestern Idaho counties from the west, and it is felt that some of this traffic would move over the proposed line. As population increases the movement of both inbound and outbound commodities would increase. The following shows the population, by counties, in 1910, 1920, and 1927:

Idaho census, 10 southwestern counties

County	1910, U. S. Government	1920, U. S. Government	1927, Rand McNally estimate	County	1910, U. S. Government	1920, U. S. Government	1927, Rand McNally estimate
Ada	29,088	35,213	37,423	Payette		7,021	7,627
Adams		2,966	3,077	Valley		2,524	2,742
Boise	5,250	1,822	1,979	Washington	11,101	9,424	9,775
Canyon	25,323	26,932	29,256				
Elmore	4,785	5,087	5,197	Counties, total	79,591	102,110	108,987
Gem		6,427	6,981				
Owyhee	4,044	4,694	4,930	State of Idaho	325,594	431,866	534,000

The witness anticipates that the entire all-rail movement to San Francisco territory from these 10 counties would be over the proposed line if constructed.

Much importance is attached by the Idaho commission to the irrigation development projects now under construction and those anticipated, and to the added products that will be available for movement if suitable rail facilities and outlets to the Pacific coast are obtained. The development of southwestern Idaho since 1890 is described in considerable detail by the record. This section looks principally to California for markets.

Irrigation projects have aided in the development of lands in southwestern Idaho as indicated by the following summary:

Area irrigated in 1902; area enterprises capable of irrigation, 1920, in the 10 southwestern counties of Idaho

Watershed	Counties	Area irrigated, 1902	Area enterprises capable of irrigation, 1920
		Acres	*Acres*
Owyhee River	Owyhee	0	11,760
Boise River	Ada	84,438	368,854
Payette River	Boise, Valley, Gem, and Payette	50,893	117,011
Weiser River	Adams and Washington	26,769	69,718
Snake River (Gem district)	Owyhee	0	20,000
Succor Creek	Owyhee	1,000	1,500
Camas Creek	Elmore	4,107	46,190
Bruneau River	Owyhee	12,862	23,011
Little Salmon River	Adams		
Reynolds Creek	Owyhee	3,000	3,000
Sinker	Owyhee	500	2,500
Total		183,569	663,544

Practically all, if not all, of the above acreage is now producing. The dry land farmed in southwestern Idaho in 1927 is shown as follows:

	Acres		Acres
Ada County	0	Payette County	23, 583
Adams County	27, 830	Valley County	53, 961
Boise County	11, 576	Washington County	82, 869
Elmore County	11, 944		
Gem County	9, 546	Total dry land	221, 309

The total of the dry land and irrigated land now producing is 884,653 acres.

The investment in irrigation projects in this territory is approximately $27,584,676. The value of the farm property in these 10 counties is given as $102,714,968, as of 1925, and this covers 9,931 farms. The value of the livestock on these farms in 1925 was estimated to be $12,867,173, and the average of all crops per year is estimated to be $33,788,792.

The total area of farm land in the 10 southwestern Idaho counties, irrigated, dry land, area soon to be irrigated, and area susceptible of irrigation is given as follows:

	Acres
Present irrigated land	663, 344
Area soon to be irrigated	75, 858
Area susceptible of irrigation	720, 500
Dry land farmed	221, 309
Total	1, 681, 011

The production of principal crops in the 10 counties is given as follows:

Commodity	1910	1920	Commodity	1920	1920
Corn, bushels	52, 371	347, 680	Barley, bushels	249, 194	325, 007
Potatoes, bushels	468, 831	887, 896	Alfalfa, tons	298, 942	635, 751
Apples, bushels	46, 517	2, 566, 395			
Wheat, bushels			Total	3, 043, 416	8, 265, 539
Oats, bushels	1, 101, 617	460, 535			

The opinions of the witnesses for the Idaho commission were that California constitutes the principal market for many Idaho products and that the proposed line would aid materially in getting their products to those markets in the shortest time and with less expense to the carriers and to the shippers due to shorter routes thereby made available. In his way it is hoped not only to market more of present production but to increase materially the demand for Idaho products and thus make practicable substantial increases in production. It is said that at present the volume of production and variety of commodities is dependent largely upon ability to dispose of the products at the markets. The present originating territory for many commodities and products moving to California points is considerably farther east than Idaho. The same commodities being produced in Idaho, and potential production being much greater than

present production, it is urged that the volume of these products moving to California from Idaho could be greatly increased if shorter rail routes were provided.

The principal markets now available for southwestern Idaho livestock are Portland and Seattle. Some shipments go to California but are limited due to heavy shrinkage losses and expense of feeding en route caused by time consumed over present routes. The demand for livestock at Portland is limited and the market is often oversupplied. The return from the sale of livestock depends upon the condition in which they arrive at the market, and it stated that often stock classed as "fat" when shipped are, due to shrinkage, reduced to "feeder" upon arrival at market. The loss due to shrinkage and extra feeding is estimated from $65 to $68 per car of stock for each added 400 miles the shipment moves on the longer hauls. The markets at Los Angeles and San Francisco, especially the latter, must be looked to by southwestern Idaho producers. The shorter route over the proposed line would be of great value in making these markets available and bringing them within permissible shipping distance.

It is suggested that livestock is now shipped to Portland and Seattle from as far east as Nebraska, but it was explained that this is done by buyers to break the market and lower the price to be paid and not because it is practicable or desirable to ship stock such long distances.

Idaho is said to have abundant feeding territory, and it is expected that much traffic will be afforded the proposed line through the use of Idaho feeding territory for feeder cattle being moved toward the markets from neighboring sections. The proposed line would permit the fattening of stock in southwestern Idaho and then quick movement to the western markets. The proposed line would also afford to shippers means of diverting shipments either north or south when reaching the north and south lines in western Oregon so as to reach the best markets.

The manager of a large cooperative creamery located at Payette, Idaho, testified as to the advantage which would accrue if the proposed line should make it possible for shipments of creamery products to be sent directly to San Francisco instead of over the present circuitous routes. A total of 3,455 farmers are interested in this creamery. An average of two cars per week of butter are now shipped, and the total shipments during 1927 amounted to 3,412,537 pounds. The California cities provide ample markets for greatly increased shipments, and the shorter route via the proposed line would assist materially in making it possible to take advantage of these markets. Considerable shipments of creamery products, poultry, and eggs are also made. All of these shipments move under ice and expedited movement is especially important.

Data were submitted to show the substantial development of southwestern Idaho in the production and shipment of butter, poultry, eggs, and other products of like nature.

During 1927 there was a total of 12,684 cars of agricultural products originated in the 10 southwest counties of Idaho. It is estimated that 3,028 cars of this production would move via the proposed line. This movement is estimated as follows:

Commodity	Cars loaded	Estimate of cars to move via proposed railroad	Commodity	Cars loaded	Estimate of cars to move via proposed railroad
Barley	31	7	Hogs	484	240
Corn	26	6	Horses and mules	135	65
Oats	95	20	Sheep	1,803	600
Wheat	1,105	280	Eggs	208	104
Hay	476	47	Poultry	113	67
Apples	4,909	490	Butter	348	174
Potatoes	979	98			
Vegetables	578	180	Total	12,684	3,028
Cattle	1,394	650			

Officials of the State of Idaho are of the opinion that their production will continue to increase by reason of better farming methods, diversified farming, dairying, better feed, water, and marketing.

BRIDGE OR DIVERTED TRAFFIC

The objects of complainants and interveners' requests are (1) reduction of distance to eastern markets for the greater part of western Oregon, (2) opening to settlement of a vast area in central Oregon which can not be brought into use until rail service is provided, and (3) reduction of distance from southeastern Oregon and southwestern Idaho to and from Pacific coast markets. Freight destined to Union Pacific points is now hauled from Eugene through Roseville, Calif., to Ogden, Utah, a distance of 1,194 miles. The Southern Pacific's share of the revenues is, of course, much larger than it would be if the traffic was interchanged at Crescent Lake, which is only 96 miles from Eugene. It is assumed by complainant that the construction of the Alturas connection by the Southern Pacific would reduce the distance but that the divisions would be unchanged.

Computations were submitted by complainant tending to show that the saving which can be made on the haul via the proposed line will be sufficient to make interchange at Crescent Lake more profitable to both the Southern Pacific and Union Pacific lines than the present interchange between these lines at Ogden. It is urged that divisions of present joint rates can be made that, when compared with costs or expenses incurred, net earnings by the Southern Pacific on the shorter haul will equal what it could or does earn via either the Alturas or Roseville route and at the same time there would remain sufficient revenue for the Union Pacific lines to make their net earnings per mile greater on the haul from Crane to Omaha, than at present from Ogden to Omaha.

The cost study submitted by complainant in support of the above statements is based upon the generally recognized fact that other things being equal a decrease in the length of haul results in a decrease in transportation costs. The study also recognizes that certain expenses vary with the volume of traffic moved over the line while other expenses do not. The former are referred to as "direct" expenses and the latter "indirect" expenses. Detailed consideration was given the various accounts and an approximation arrived at as to each item of expense to show the proportion of such expense to be classed as direct and indirect respectively. The analysis is primarily based on the operating expense accounts of the O.-W. R. & N. and Oregon Short Line for the year 1925. Separation is also made of operating expenses between line and terminal. The study includes consideration of the various classes of service, such as carload and less-than-carload movement, operating divisions and peculiar conditions encountered in operating thereover, main and branch line service, loaded and empty movements, and weight and car loading of commodities hauled.

Final unit costs are arrived at for the entire movement of the various commodities originating in western Oregon and moving to Ogden via the various routes, including the proposed route over the line which the carriers are asked to construct. These unit costs are applied to all tonnage or shipments originated by the Southern Pacific in certain western Oregon counties, during the year 1926, and which moved through Ogden, Utah. The savings which would result from moving this tonnage over the proposed line as compared with other routes via Alturas or Roseville are set up. By reference to the map it will be seen that shipments routed via the proposed line and Oregon Short Line would reach the Ogden-Omaha line of the Union Pacific at Granger, Wyo.

The total estimated annual saving possible by using the proposed route as compared with the present Roseville route is $2,174,024, and as compared with the contemplated route via Alturas is $859,781.

Assuming that the tonnage originated by the O.-W. R. & N. on the line running north from Bend and destined to eastern points would, through trackage arrangements over the line south of Bend, be moved south to and then east over the proposed line an additional saving to the Union Pacific lines on loaded and empty movement of $135,607 is expected as compared with present route via Sherman, and a saving of $145,607 is expected as compared with the contemplated route via Alturas.

The following illustration is given of the division of joint rates between the carriers, as compared with the cost of movement over the different routes, which would be necessary in order to avoid loss to the Southern Pacific and to compensate the Union Pacific lines for service performed. The illustration covers a car of fir lumber (1) originating at Eugene and moving to Omaha and (2) originating at Eugene and moving via and beyond Omaha at present rates.

	Amount		Amount
CAR OF FIR LUMBER FROM EUGENE, DESTINED TO OMAHA		CAR OF FIR LUMBER FROM EUGENE, DESTINED BEYOND OMAHA	
Freight charge 70,000 pounds at 62.5 cents	$437.50	Freight charge 70,000 pounds at 55 cents	$385.00
Southern Pacific—		Southern Pacific—	
Eugene to Ogden, earnings	253.75	Eugene to Ogden, earnings	224.00
Cost via Alturas	174.40	Cost via Alturas	174.40
Net earnings	79.35	Net	49.60
Union Pacific—		Union Pacific—	
Ogden to Omaha, earnings	183.75	Ogden to Omaha, earnings	161.00
Cost	149.50	Cost	144.75
Net, 990 miles	34.25	Net, 990 miles	16.25
Net per mile	.0346	Net per mile	.0164
Via Crane—		Via Crane—	
Southern Pacific—		Southern Pacific—	
Eugene to Crescent Lake, cost	48.54	Eugene to Crescent Lake	48.54
Net as above	79.35	Net as above	49.60
Gross to produce same net	127.89	Gross to produce same net	98.14
Balance for Union Pacific, gross	309.61	Balance for Union Pacific, gross	286.86
Union Pacific cost, Crescent Lake to Omaha	242.36	Union Pacific cost, Crescent Lake to Omaha	237.61
Union Pacific net, 1,659 miles	67.25	Union Pacific net, 1,659 miles	49.25
Net per mile	.0406	Net per mile	.0297

The recommendations of complainant as to divisions of joint rates necessary to realize and carry into effect the proposed arrangement are as follows:

"Let the Union Pacific be required to build from Crane to Crescent Lake within a reasonable time, with the assurance that for a period of three years thereafter the joint rates established for interchange at Crescent Lake will be such as to give the Union Pacific about 85% of the saving over the existing route via Roseville as compensation for its investment, while the Southern Pacific would receive the remaining 15%, as an addition to its net revenues, without any additional cost.

"Let the order of the commission which requires the building of the Cross-State Line provide that whenever the Southern Pacific, after the expiration of the three-year period, completes the line from Klamath Falls to Alturas there shall then be established a new set of joint rates at Crescent Lake, the effect of which shall be to give the Southern Pacific net earnings on freight turned over to the Union Pacific at Crescent Lake equal to those which would be earned by it on delivery of that freight to the same carrier at Ogden, under the joint rates now existing.

"Let it also be required that the Southern Pacific shall thereafter deliver to the Union Pacific at Crescent Lake all freight which originates north or west of Crescent Lake, or within a reasonable distance south thereof, and which is destined to Ogden or points east."

Of the traffic exchanged with the Southern Pacific, there were only one-sixth as many cars of other commodities east and west bound together, as of lumber. On the average these commodities carry higher rates than lumber, therefore, it seems fair to take for the net earnings of the cross-State line on these commodities the same amount per car as on lumber. On westbound traffic it is as-

sumed that no empty haul is required. Net earnings are therefore taken as the same as on eastbound, less the cost of empty movement.

As for the Bend traffic, both the present and the proposed routes are entirely on the lines of the Union Pacific system, and the entire saving on both loads and empties may be therefore credited to the cross-State line.

Under the joint rates proposed for the 3-year period, the estimated increase in annual net operating earnings of the Union Pacific on traffic equal to that of 1926, if moved over the Crane cut-off, would be as shown on the following page.

Origin and destination	Commodity	Cars	Interchange at—			
			Ogden		Crescent Lake	
			Per car	Total	Per car	Total
Eugene to Omaha	Lumber	3,006	$34.25	$102,956	$120.76	$363,005
Eugene to beyond Omaha	Lumber	12,556	16.25	204,035	81.94	1,028,840
Klamath Falls to Omaha	Lumber	906	−11.15	−10,102	29.68	26,890
Klamath Falls to beyond Omaha	Lumber	3,778	−27.21	−102,800	2.68	10,125
Medford to Omaha	Lumber	140	.22	31	28.15	3,940
Medford to beyond Omaha	Lumber	586	−17.42	−10,208	−3.77	−2,210
Eugene to Utah points	Lumber	1,488			61.03	90,813
Average on lumber			8.20		67.74	
Oregon points east	Other	3,532	8.20	28,962	67.74	239,256
Eastern points to Oregon points	Miscellaneous	1,226	[1] 54.00	66,204	145.75	178,690
Total		27,218		279,078		1,939,351
Increase in net earnings on Southern Pacific traffic						1,660,273
Savings on cars to and from Bend						145,607
Total increase in net earnings of Union Pacific, account cross-State line						1,805,880

[1] With no back haul of empty cars.

Under the joint rates proposed for the 3-year period, the increase in annual net operating earnings of the Southern Pacific system on traffic equal to that of 1926, if moved over the proposed extension, would be as shown below:

Origin and destination	Commodity	Cars	Interchange at—			
			Ogden		Crescent Lake	
			Per car	Total	Per car	Total
Eugene to Omaha	Lumber	3,006	$30.85	$92,735	$25.84	$77,675
Eugene to beyond Omaha	Lumber	12,556	1.10	13,812	16.91	212,322
Klamath Falls to Omaha	Lumber	906	14.78	13,390	25.34	22,958
Klamath Falls to beyond Omaha	Lumber	3,778	−7.41	−27,995	18.84	71,178
Medford to Omaha or west	Lumber	140	13.54	1,896	11.90	1,666
Medford to beyond Omaha	Lumber	586	−10.82	−6,340	1.82	1,067
Eugene to Utah points	Lumber	1,488	104.89	156,076	104.41	155,362
Average on lumber			10.85		24.14	
Oregon points east	Other	3,532	10.85	38,322	24.14	85,262
Eastern points to Oregon points	Miscellaneous	1,226	[1] 67.50	82,755	29.30	35,922
Total				364,651		663,412
Total increase in net earnings of Southern Pacific, account cross-State line						298,761

[1] With no back haul of empty cars.

The net earnings on traffic of 1926 by proposed routes by Alturas and by Crane would be as shown below:

Origin and destination	Commodity	Cars	Interchange at—			
			Ogden		Crescent Lake	
			Per car	Total	Per car	Total
Union Pacific system:						
Eugene to Omaha	Lumber	3,006	$34.25	$102,956	$77.02	$231,522
Eugene to beyond Omaha	Lumber	12,556	16.25	204,035	43.44	545,433
Average on lumber			19.73		49.90	
Eugene to Omaha and east	Other	1,722	19.73	33,975	49.90	85,928
Eastern points to Oregon points	Miscellaneous	788	67.05	52,835	127.73	100,651
Total				393,801		963,534
Increase in net earnings on Southern Pacific traffic						569,733
Saving on cars to and from Bend						145,607
Total increase in net earnings account cross-State line						715,340
Southern Pacific system:						
Eugene to Omaha	Lumber	3,006	79.35	238,526	69.58	209,157
Eugene to beyond Omaha	Lumber	12,556	49.60	622,778	55.41	695,728
Average on lumber			55.35		58.15	
Eugene to Omaha and east	Other	1,722	55.35	95,313	58.15	100,134
Eastern points to Oregon points	Miscellaneous	788	99.72	78,579	61.54	48,494
Total				1,035,196		1,053,513
Increase in net earnings by diversion to cross-State line						18,317

The preceding statements reflect earnings or savings which are anticipated by complainants on existing traffic alone. These were supplemented by estimates of earnings which are anticipated from increases in traffic which would result from the proposed construction, and from existing traffic which would be diverted to this route due to possible savings. The basis of these supplemental estimates are the estimates of potential traffic referred to herein and to the possible savings also previously considered.

	Diverted traffic		Traffic created		Total earnings
	Cars	Earnings	Cars	Earnings	
First year	30,628	$1,805,880	3,777	$134,996	$1,940,876
Third year	37,402	2,204,831	4,628	155,645	2,360,476
Fourth year	28,893	964,135	5,651	176,710	1,140,845
Fifth year	31,362	1,047,033	6,279	191,929	1,238,962

The above statement is based upon the assumption that the Alturas connection of the Southern Pacific will be completed in three years.

No earning is expected from passenger traffic over the proposed line, but it is anticipated that no deficit will result and that expense of passenger service will be fully sustained by that traffic.

The indirect operating expenses and taxes for the proposed line are estimated as $350,000. Assuming that operation over the line of the Great Northern south from Bend to the proposed line was arranged the estimated indirect expense and taxes to be paid amount to $55,000, making a total amount for indirect expenses and taxes for the proposed line of $405,800.

Summarizing the preceding statements, the net earnings and return of the proposed line for a 5-year period on Oregon traffic alone would be as follows:

Year	Net earnings		Indirect expenses and taxes	Return
	Freight	Passenger		
First	$1,940,876	$2,680	$405,800	$1,537,756
Second	2,150,676	2,680	405,800	1,747,556
Third	2,360,476	2,680	405,800	1,957,356
Fourth	1,140,845	2,680	405,800	737,725
Fifth	1,238,962	2,680	405,800	835,842
Total in 5 years				6,816,235

It is estimated by complainant that the total cost of constructing the line from near Crane to Crescent Lake, a distance of approximately 181 miles, will be approximately $9,000,000. Assuming that half-interest would be acquired in that portion of the Great Northern line from Bend to the proposed line at a cost of $908,000, the total cost would be $9,908,000. The total return and the per cent of return on investment for each of the first five years would be as follows:

Year	Return	Per cent	Year	Return	Per cent
First	$1,537,756	15.5	Fourth	$737,725	7.4
Second	1,747,556	17.7	Fifth	835,842	8.4
Third	1,957,356	19.8			

The foregoing statements do not include revenues from traffic moving to and from points in southwestern Idaho over the proposed line. These revenues are estimated by complainant as follows:

Year	Eastbound	Westbound	Total
First year	$65,745.47	$158,531.21	$224,276.68
Second year	74,047.25	176,883.65	250,930.90
Third year	82,219.31	176,883.65	259,102.96
Fourth year	90,521.10	176,883.65	267,404.75
Fifth year	98,683.06	195,236.08	293,919.14

An analysis of probable revenues for the proposed line, including Idaho traffic, from a rate standpoint, was also submitted by complainant, as follows:

Year	Bridge traffic	Traffic to and from points on line	Idaho traffic	Total
First	$1,227,829.04	$255,510.44	$224,276.68	$1,707,616.16
Second	1,368,129.25	270,134.26	250,930.90	1,889,194.41
Third	1,508,345.44	295,069.56	259,102.96	2,062,517.96
Fourth	1,152,570.30	345,708.54	267,404.75	1,765,683.59
Fifth	1,235,542.50	388,850.81	293,919.14	1,918,312.45

POSITION OF CARRIERS

The general position of the O.-W. R. & N. is that the entire proposition of building a line across central Oregon to a connection with the Southern Pacific is economically unsound; that the nature and resources of the territory are such as to prohibit development of sufficient traffic to sustain the line; that existing rail facilities are ample to properly take care of all needs of eastern and western Oregon and of southwestern Idaho; and that the Southern Pacific can not be expected to divert traffic to the cross-State line and thereby short haul itself.

The position of the Southern Pacific is similar to that of the O.-W. R. & N., and in addition it urges that as a matter of law it can not be compelled to divert traffic to the cross-State line when such diversion would result in short hauling itself; that complainant's computations of alleged savings possible through such diversion are inaccurate; that large expenditures have been and are being made in the construction of additional rail facilities in western Oregon in order to properly serve that territory and to expeditiously handle the traffic and that such facilities are more than sufficient for present and prospective traffic.

The position of the Great Northern is embraced in the views set forth above.

While the Southern Pacific criticizes complainant's estimates of savings pos'ible through the use of the proposed extension and route, as compared with other routes, and further urges that it would not give to the proposed line any traffic, it is not reasonable to assume that where no loss to the Southern Pacific will result, complainant's plan, or some modification thereof, will not be carried out in the interest of efficient and economical management as contemplated by the act.

Defendants criticize the traffic estimates of complainant and interveners and contend that they are much too high. The traffic witnesses for complainant and defendants estimated that the revenues from traffic originating on and destined to points on the proposed line would be as follows:

Year	Complainant's estimate	Carrier's estimate	Year	Complainant's estimate	Carrier's estimate
First	$255,510.44	$98,010.00	Fourth	$345,708.54	$190,913.00
Second	270,134.26	107,248.00	Fifth	388,850.81	199,152.00
Third	295,069.56	182,600.00			

The probable revenues for the proposed line from traffic moving from and to points in southwestern Idaho were computed by complainant's traffic expert, as follows:

First year	$224, 276. 28
Second year	250, 930. 90
Third year	259, 102. 96
Fourth year	267, 404. 75
Fifth year	293, 919. 14

Defendants did not submit an estimate of the probable revenues for the proposed line from Idaho traffic. They do urge that the estimate of complainant is too high and that much of the revenues as used by complainant is from existing traffic and would be taken from the present earnings of the O.-W. R. & N. and Oregon Short Line.

The difficulty in estimating development which will follow the construction of an extension into this virgin territory is apparent. In neither the estimates of complainant nor defendants is any consideration given to the development which would follow short extensions or branches from the proposed construction. It is not reasonable to presume that such branches would not be constructed. Little attention has been given to traffic moving from the east to western Oregon and which would logically move via the proposed route. There is also substantial evidence that construction of feeder lines by other companies in western Oregon would follow construction of the proposed extension and that such lines would bring to the proposed line considerable traffic. When consideration is given to these matters we think complainant's estimates of probable traffic and revenues are lower than would actually follow after a reasonable development period.

The matter of establishing through routes and joint rates from western Oregon to the east via the proposed extension can not properly be disposed of except upon an adequate record dealing with all the facts relating thereto. We can not require the establishment of through routes and joint rates at this time because the line is not yet in existence. It does seem reasonable to assume that a substantial volume of western Oregon traffic will move to the east via the proposed line when consideration is given to the shortened mileage and the savings which it is shown can be brought about in transportation costs through the use of this route. After careful consideration of complainant and interveners' traffic and revenue estimates, and of defendants' criticisms thereof, we are firm in the belief that the extension would be a valuable asset to the Union Pacific system and would be an effective feeder for that system after a reasonable development period. At the same time the construction would bring about development in a vast territory. It would be of material benefit to the present Ontario-Burns branch.

It is not necessary in establishing that the extension is reasonably required in the interest of public convenience and necessity to show

that the extension would of itself, and considered as standing alone, earn sufficient revenues to make it profitable. The relation of the extension to the Union Pacific system and its possibilities as a developer of traffic for that system must be considered. We have recognized this principle in many cases. Thus in Construction of Extension by O.-W. R. R. & Nav. Co. (86 I. C. C. 265) we said of the extension of the Ontario-Crane branch from Crane to Burns, a distance of approximately 30 miles:

"It is not expected that the extension will be profitable in itself, but as a feeder of the Union Pacific system it will probably earn a fair return on the investment."

The estimated cost of the construction in that case was $1,076,025. The application for certificate was filed by the O.-W. R. & N. and the certificate was issued to the O.-W. R. & N. although it is apparent that only as a feeder for the Union Pacific system could the extension be expected to earn a fair return on the investment. In that case we further said:

"The cost of construction will be financed from current funds or by advances to be made by the Union Pacific Railroad Company which owns all the capital stock of the Oregon Short Line Railroad Company."

The situation in the instant case is very similar to that involved in the case cited, the difference being one only of degree. There appears no reason for requiring a greater or different showing of public convenience and necessity under paragraph 21, than under paragraph 18 of section 1, for the language is practically identical.

In Construction of Natron Cut-Off by Central Pacific (82 I. C. C. 185) we authorized construction which it was estimated would cost, without equipment, $16,182,616. There we said:

"* * * There is no land under cultivation and the estimate of traffic submitted does not indicate that any important agricultural development is expected. The territory is sparsely inhabited, the total estimated population of the new territory to be served being 200.

* * * * * * *

"The primary purposes of the proposed construction are to develop the local traffic which, it appears, will be almost wholly dependent on the exploitation of the timber resources, and to complete an alternate line between Weed and Springfield Junction, a distance of 296 miles, over which through traffic can be handled more economically than by the existing line."

The convenience and necessity of the public depends not at all upon the willingness or unwillingness of the carriers to provide the facilities or render the service sought. The requisites set forth in the statute are practically identical whether the construction is to be voluntary or compulsory. Case after case might be cited where applications of the carriers for certificates covering construction un-

der less favorable circumstances, as related to probable traffic, revenues, and public benefit, than are present in this case have been granted. There can be no justification for granting requests of the carriers under given circumstances and under similar or more favorable circumstances denying appeals of the people for relief and for a reasonable chance to develop a great State. There can be no better criterion or guide to follow in determining what the carriers, including defendant carriers, consider a prudent investment which is justified in the interest of public convenience and necessity than the instances where certificates have been sought and granted authorizing construction of rail extensions.

EXPENSE INVOLVED

Complainant estimates that the cost of construction of the extension as proposed would be approximately $9,000,000, or about $49,000 per mile. Defendants estimate that the cost of constructing and equipping the extension would be $11,717,677, or approximately $63,340 per mile. Complainant estimates that operating expenses would be $350,400 per annum. The question is presented whether this expense will impair the ability of the carrier to perform its duty to the public.

The annual report of the Union Pacific system for the year ended December 31, 1927, made by the board of directors to the stockholders of the Union Pacific Railroad Company, shows the following:

	1927	1926
1. Capital stock outstanding in the hands of the public:		
Common stock	$222,293,100.00	
Preferred stock	99,543,500.00	
Total	321,836,600.00	
2. Total funded debt	411,317,075.00	
3. Excluding all offsetting accounts between the Union Pacific Railroad Company, Oregon Short Line Railroad Company, Oregon-Washington Railroad & Navigation Company, and Los Angeles & Salt Lake Railroad Company:		
(a) Net income from transportation operations	39,483,390.26	$42,100,143.04
(b) Total income	57,919,019.83	59,229,806.61
(c) Fixed and other charges	18,253,784.61	18,245,057.43
(d) Net income from all sources	39,665,235.22	40,984,749.18
(e) Dividends on preferred stock	3,981,740.00	3,981,740.00
(f) Sinking-fund requirements		5,676.00
(g) Surplus for common stock of Union Pacific Railroad	35,683,495.22	36,997,332.54
(h) Per cent earned on par value	16.05	16.64
(i) Dividends on common stock	22,229,160.00	22,229,160.00
(j) Surplus, transferred to profit and loss	13,454,335.22	14,768,172.54

It is clear from the above that the expense involved by the construction of the extension would not impair the ability of the carrier or carriers involved to perform their duty to the public.

The suggestion is made by certain interveners that any extension west from Crane should run north of the proposed location and through Prineville and Bend. The location proposed by the Oregon commission follows the survey of the carrier and the evidence shows

that all things considered it is the most desirable and practicable location.

We find that an extension of the rail line of the O.-W. R. & N., now terminating at or near Burns, Oreg., from, or near, a station thereon designated as Crane, Oreg., to a connection with the Cascade line of the Southern Pacific at, or near, Crescent Lake, Oreg., by the Oregon-Washington Railroad & Navigation Company, is reasonably required in the interest of public convenience and necessity and that the expense involved therein will not impair the ability of the carrier or carriers involved to perform their duty to the public, and that the facts justify an order requiring such extension to be constructed. An appropriate order will be entered requiring the Oregon-Washington Railroad & Navigation Company to construct the extension substantially as proposed by complainant and authorizing the Union Pacific Railroad Company to participate therein.

As previously shown, the O.-W. R. & N. is owned by the Oregon Short Line, which, in turn, is owned by the Union Pacific. All eastbound traffic moving from and over this extension will move practically the full length of the latter carriers. Under such circumstances it would be inconsistent and contrary to fairness to consider the new construction with relation only to the O.-W. R. & N., and apart from the Oregon Short Line and the Union Pacific. In view of these facts, it is expected that the cost of the construction will be financed by the Union Pacific in a manner similar to that which it voluntarily followed in the construction of the Burns extension previously referred to.

BRAINERD, Commissioner, dissenting:

While the construction of the proposed line of railroad might be of some convenience to the public, I am of the opinion that the commission has no authority to require its construction. In the *Los Angeles Passenger Terminal case*,[1] recently decided by the Supreme Court, Chief Justice Taft said:

"If Congress had intended to give an executive tribunal unfettered capacity for requisitioning investment of capital of the carriers and the purchase of large quantities of land and material in an adverse proceeding, we may well be confident that Congress would have made its meaning far clearer and more direct than in the present meager provisions of the transportation act."

A like observation is appropriate here. For these reasons I am obliged to dissent from the decision of the majority herein.

PORTER, Commissioner, dissenting:

While as at present advised, I am persuaded we have authority to compel the construction of the line of railway involved in this case, I am not convinced we should make such an order upon the record

[1] Interstate Commerce Commission v. United States ex. rel. City of Los Angeles. (Supreme Court of the United States, November 25, 1929, page 9.)

now before us. I appreciate that the Supreme Court in *Dayton Goose Creek Ry. Co.* v. *U. S.* (263 U. S. 456, 478) has said that the law now puts the railway systems of the country more completely than ever under the fostering guardianship and control of the commission, nevertheless, as the same court has said in *Southwestern Tel. Co.* v. *Pub. Serv. Comm.* (262 U. S. 276, 289) the State is not the owner of the property and is not clothed with the power of management incident to ownership.

Those charged with the management of the property have refused to construct the railway. They insist the large expenditure that would be required, the taking on of the unprofitable operation that would follow, and the fact that the new line must look almost entirely to traffic diverted from other lines operating far below their present capacity, do not justify the construction. This should have great weight with us and give us pause.

The extraordinary character of the power lodged with us to say to a carrier against its will that it shall construct a piece of railway 187 miles in length, costing from nine to twelve millions of dollars, should require a clear and convincing showing of the public necessity requiring it, and of the probable favorable results therefrom, before we should exercise it. I am not convinced that such a showing has been made in the record we have here, and hence, I am unable to agree with the report.

FARRELL, Commissioner, dissenting:

I am unable to concur in the views of the majority, because I find nothing in the interstate commerce act which appears to me to clothe us with authority to require a carrier subject to the act to construct a new line of railroad. According to my understanding, the provisions relied upon in this connection are contained in paragraph (21) of section 1 of the act, wherein we are authorized to require a carrier "to provide itself with safe and adequate facilities for performing as a common carrier its car service as that term is used in this act, and to extend its line or lines." That the term "facilities" as here used does not cover the construction mentioned is made clear by the definition of "car service" in paragraph (10) of said section, which reads:

"(10) The term 'car service' in this act shall include the use, control, supply, movement, distribution, exchange, interchange, and return of locomotives, cars, and other vehicles used in the transportation of property, including special types of equipment, and the supply of trains, by any carrier by railroad subject to this act."

And, in my opinion, the extension of lines referred to can not properly be construed as covering a new line of railroad, but must instead be confined to such extension as is necessary to enable the carrier to serve the public adequately with some railroad which has already been constructed and in territory which has already been occupied by the carrier.

Commissioner WOODLOCK dissents.

ORDER

At a general session of the Interstate Commerce Commission, held at its office in Washington, D. C., on the 3d day of December, A. D. 1929

No. 19680

PUBLIC SERVICE COMMISSION OF OREGON

v.

CENTRAL PACIFIC RAILWAY COMPANY; DESCHUTES RAILROAD COMPANY; Great Northern Railway Company; Northern Pacific Railway Company; Oregon Electric Railway Company; Oregon Short Line Railroad Company; Oregon Trunk Railway; Oregon-Washington Railroad & Navigation Company; Southern Pacific Company; Spokane, Portland and Seattle Railway Company; and Union Pacific Railroad Company

This case being at issue upon complaint and answers on file, and having been duly heard and submitted by the parties, and full investigation of the matters and things involved having been had, and the commission having on the date hereof, made and filed a report containing its finding of fact and conclusions thereon, which said report is hereby referred to and made a part hereof:

It is ordered that the Oregon-Washington Railroad & Navigation Company be, and it is hereby, notified and required to extend its line of railroad, now terminating at or near Burns, Oreg., from, or near, a station thereon designated as Crane, Oreg., to a connection with the Cascade line of the Southern Pacific Company at, or near, Crescent Lake, Oreg.

It is further ordered that the Union Pacific Railroad Company, which owns all of the capital stock of the Oregon Short Line Railroad Company, which in turn owns all of the capital stock of the Oregon-Washington Railroad & Navigation Company except 15 shares, be, and it is hereby, authorized to join in the construction and operation of said extension and to finance it from current funds or by advances.

It is further ordered that the extension hereby required to be constructed shall be commenced on or before July 1, 1930, and shall be completed and in operation before July 1, 1933.

It is further ordered that the Oregon-Washington Railroad & Navigation Company shall report to this commission, in writing, the commencement and the completion of such construction, within 15 days after such commencement and completion, respectively.

It is further ordered that the Oregon-Washington Railroad & Navigation Company when filing schedules establishing rates and

fares applicable on said line of railroad, shall in such schedules refer to this order by title, date, and docket number.

And it is further ordered that the Oregon-Washington Railroad & Navigation Company shall report to this commission as required by valuation order No. 24, effective May 15, 1928.

By the commission..

[SEAL.] GEORGE B. MCGINTY, *Secretary.*

65a [File endorsement omitted.]

66a [Omitted.]

67a In United States District Court

[Title omitted.]

Proof of service

Filed June 5, 1930

UNITED STATES OF AMERICA,
District of Columbia, ss:

I, George B. McGinty, secretary of the Interstate Commerce Commission, do hereby certify that on the 31st day of May, 1930, a copy of the petition in the above-entitled cause was filed in the office of the secretary of the Interstate Commerce Commission at Washington, D. C.

Dated this 31st day of May, 1930.

GEORGE B. MCGINTY,
Secretary of Interstate Commerce Commission.

[File indorsement omitted.]

68a [Omitted.]

69a In United States District Court

[Title omitted.]

Proof of service

Filed June 5, 1930

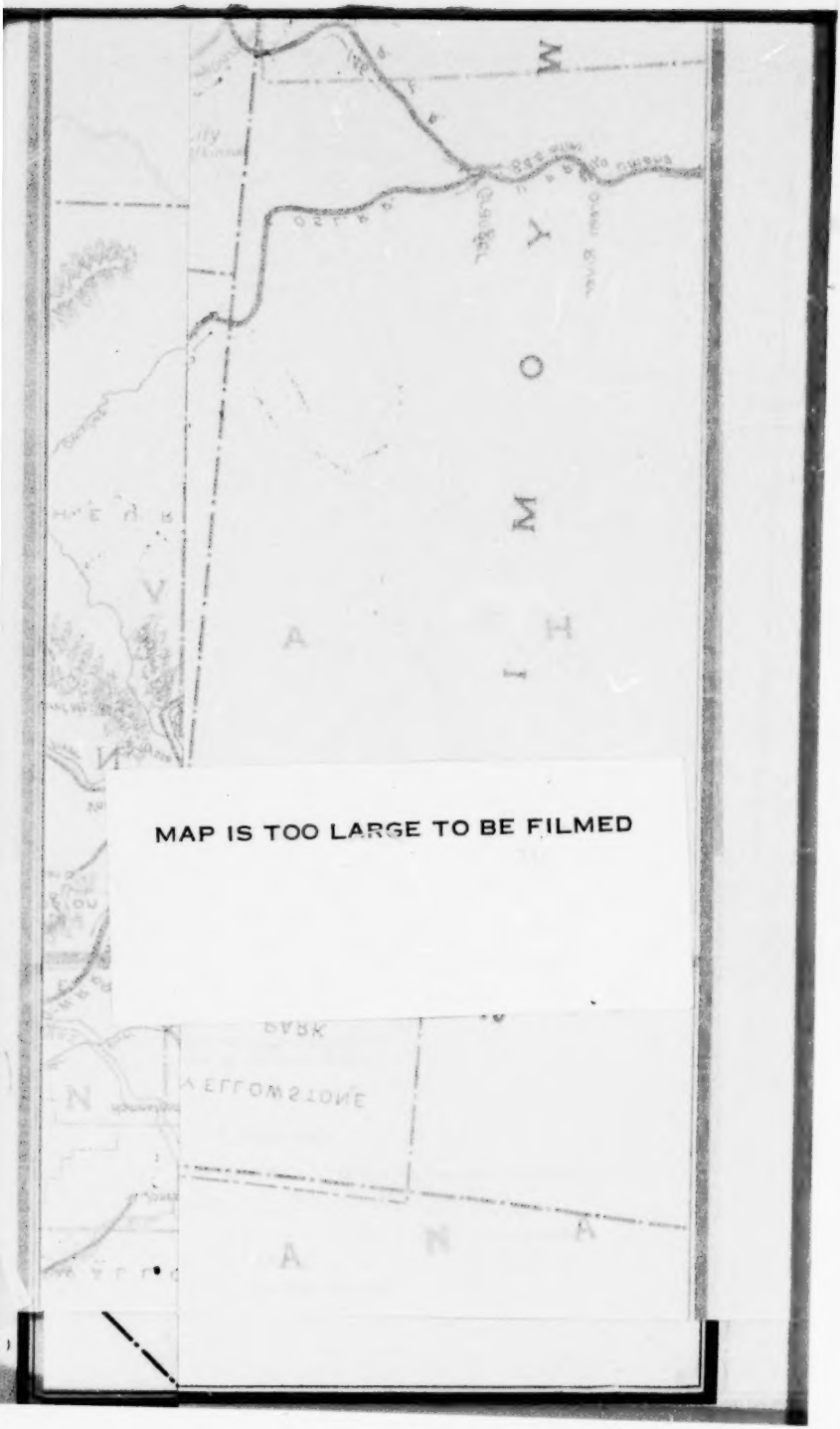
UNITED STATES OF AMERICA,
District of Columbia, ss:

I, William D. Mitchell, Attorney General of the United States, do hereby certify that on the 31st day of May, 1930, a copy of the petition in the above-entitled cause was duly filed in the office of the Department of Justice at Washington, D. C.

Dated this 2 day of June, 1930.

JOHN LORD O'BRIAN,
The Assistant to the Attorney General.

[File endorsement omitted.]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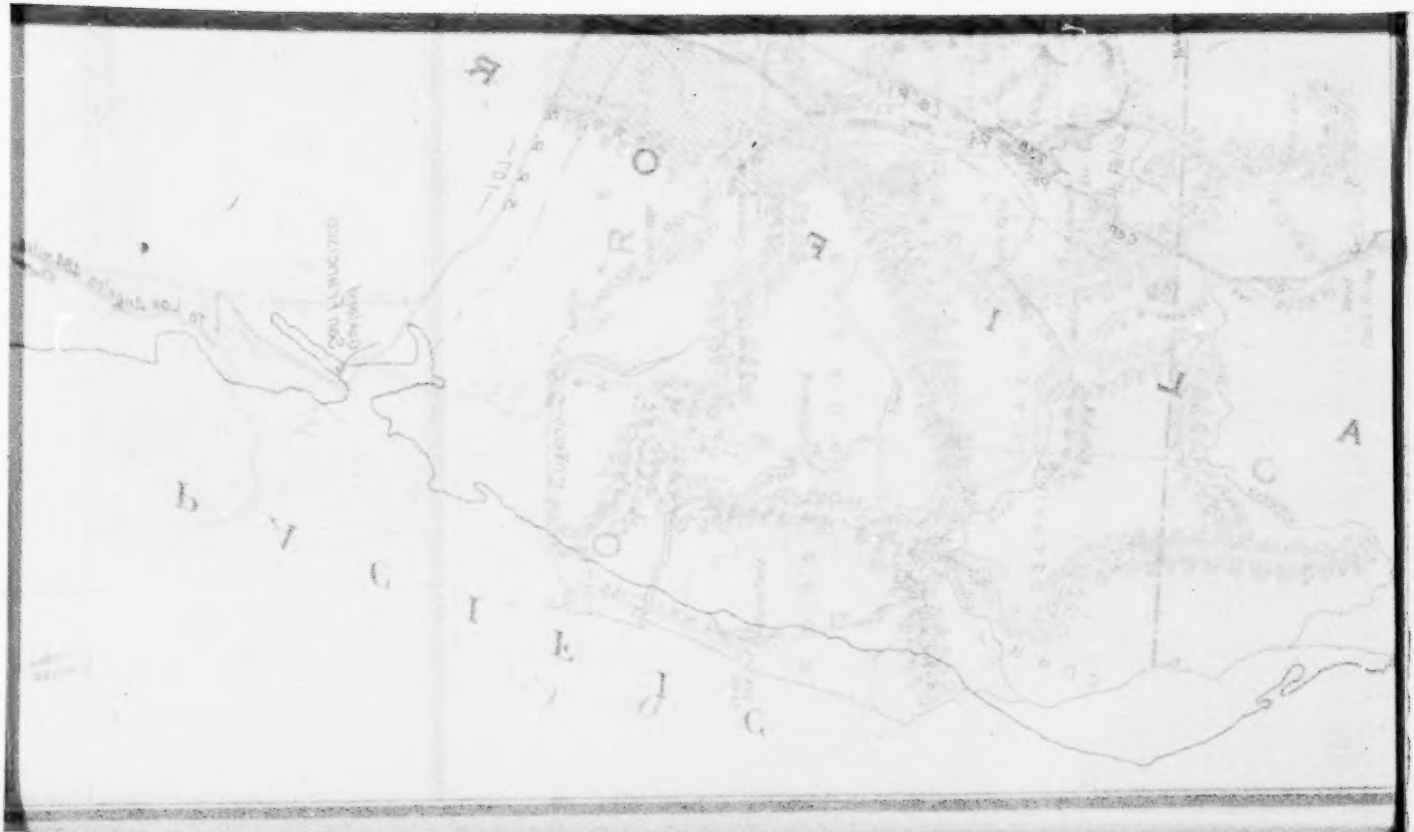

70a [Omitted.]

71a In United States District Court

[Title omitted.]

Order allowing time to file answer

June 27, 1930

Now at this day upon motion of Mr. George Neuner, United States attorney,

It is ordered that the defendant be, and it is hereby, allowed to and including August 1, 1930, within which to file its answer herein.

72a [Omitted.]

73a In United States District Court

[Title omitted.]

Stipulation to amend petition, etc.

Filed July 10, 1930

It is hereby stipulated by and between the petitioner herein, the United States of America, and the Interstate Commerce Commission, appearing by their respective solicitors, as follows:

I

That the original petition on file in this court and cause may be amended by the petitioner by interlineation as follows:

(a) Strike from line 31 on page 17, the figures "1914" and substitute therefor "1924."

(b) Strike from line 8 on page 41 the word "within" and substitute therefor the words "as great as."

(c) Strike from line 15 on page 41 the word "labor" and substitute therefor the word "lumber."

(d) Add the words "General Manager," following the signature of J. P. O'Brien on page 51.

II

That consent of the United States of America and the Interstate Commerce Commission be, and is hereby, extended to the petitioner for the filing by the petitioner in said court and cause, and without further or other notice to the United States of America or the Interstate Commerce Commission, of petitioner's supplemental petition herein, a copy of which has this day been served upon solicitors

for said respective parties and upon the original of which the United States of America and Interstate Commerce Commission by their solicitors have acknowledged services.

74a Dated, June 26, 1930.

HENRY W. CLARK,
J. M. SOUBY,
ARTHUR C. SPENCER, &
ROY F. SHIELDS,
Solicitors for Petitioner.
ELMER B. COLLINS,
Special Assistant to the Attorney General,
Solicitor for the United States of America.
J. STANLEY PAYNE,
Solicitor for Interstate Commerce Commission.

[File endorsement omitted.]

75a [Omitted.]

76a In United States District Court

[Title omitted.]

Order allowing amendment of petition by interlination, and to file supplemental petition

Filed July 10, 1930

In accordance with the stipulation between petitioner, Oregon-Washington Railroad & Navigation Company, the United States of America, and the Interstate Commerce Commission, by their respective solicitors, this day filed in this cause, it is

Ordered that petitioner may amend by interlineation its original petition in this cause as follows:

(a) By striking from line 31 on page 17 the figures "1914" and substituting therefor the figures "1924."

(b) By striking from line 8 on page 41 the word "within" and substituting therefor the words "as great as."

(c) By striking from line 15 on page 41 the word "labor" and substituting therefor the word "lumber."

(d) By adding the words "General Manager," following the signature of J. P. O'Brien on page 51.

It is further ordered that petitioner may file in this cause its supplemental petition verified June 25, 1930, and served upon the respective solicitors for the United States of America and the Interstate Commerce Commission on June 26, 1930, and now tendered for filing.

Dated, this 10 day of July, 1930.

R. S. BEAN, *Judge.*

[File endorsement omitted.]

77a [Omitted.]

78a In United States District Court

[Title omitted.]

Supplemental petition

Filed July 10, 1930

To the Honorable Judges of the District Court of the United States for the District of Oregon:

Your petitioner herein, Oregon-Washington Railroad & Navigation Company, respectfully shows:

I

That on the 28th day of May, 1930, it filed its petition in this honorable court against the United States of America, and therein and thereby prayed that a decree be entered in said cause setting aside, annulling and suspending the order of the Interstate Commerce Commission described in said petition, a copy of which was attached as Exhibit B to said petition as a part thereof, and in which it was provided:

"It is ordered that the Oregon-Washington Railroad & Navigation Company be, and it is hereby, notified and required to extend its line of railroad, now terminating at or near Burns, Oreg., from, or near, a station thereon designated as Crane, Oreg., to a connection with the Cascase line of the Southern Pacific Company at, or near, Crescent Lake, Oreg.

"It is further ordered that the Union Pacific Railroad Company, which owns all of the capital stock of the Oregon Short Line Railroad Company, which in turn owns all of the capital stock of the Oregon-Washington Railroad & Navigation Company except 15 shares, be, and it is hereby, authorized to join in the construction and operation of said extension and to finance it from current funds or by advances.

"It is further ordered that the extension hereby required to be constructed shall be commenced on or before July 1, 1930, and shall be completed and in operation before July 1, 1933."

II

That since the filing of said petition in said court as aforesaid, and on the 19th day of June, 1930, said Interstate Commerce Commission, without the taking of any further testimony in said cause re-
79a ferred to in its said order and in said petition, modified its said order as follows and not otherwise, to wit:

"It is ordered that the order entered in this proceeding on December 3, 1929, which required that construction of the extension be commenced on or before July 1, 1930, be, and it is hereby, modified by postponing said date on or before which construction must be commenced to January 1, 1931."

III

That the matters complained of by petitioner in its said petition are in no respect changed or affected by said order of June 19, 1930, and petitioner and its properties remain exposed without remedy with respect thereto, all and singular as alleged in its said petition, unless it receive the relief therein prayed for.

Wherefore, petitioner prays that a decree be entered herein setting aside, annulling, and suspending said order of the Interstate Commerce Commission, as so modified, and that the defendant, its officers and agents, be perpetually enjoined from enforcing or attempting to enforce said order; that the defendant and its officers and agents be perpetually enjoined from instituting or prosecuting any action or proceeding to recover any penalty or penalties from the petitioner by reason of its refusal or neglect to comply with said order of the Interstate Commerce Commission, as so modified; that the said provision in paragraph 21 of section 1 of the interstate commerce act concerning the extension of the line or lines of carriers by railroad subject to said act as construed and applied by said Commerce Commission as more fully appears in said petition and in Exhibit B thereto attached be declared unconstitutional and void, and that petitioner have such other and further relief in the premises as justice and equity may require.

OREGON-WASHINGTON RAILROAD
& NAVIGATION COMPANY,
By J. P. O'BRIEN, *General Manager.*

HENRY W. CLARK,
J. M. SOUBY,
ARTHUR C. SPENCER,
ROY F. SHIELDS,
Its Solicitors.

80a [*Duly sworn to by J. P. O'Brien; jurat omitted in printing.*]

[File indorsement omitted.]

81a [Omitted.]

82a In United States District Court

[Title omitted.]

Second supplemental petition

Filed Jan. 20, 1931

To the Honorable Judges of the District Court of the United States for the District of Oregon:

Your petitioner herein, Oregon-Washington Railroad & Navigation Company, respectfully shows:

I

That on the 28th day of May, 1930, it filed its petition in this honorable court against the United States of America and therein prayed that a decree be entered in said cause setting aside, annulling, and suspending the order of the Interstate Commerce Commission described in said petition, a copy of which order was and is attached as Exhibit B to said petition.

II

That thereafter and on the 19th day of June, 1930, said Interstate Commerce Commission, without the taking of any further testimony in said cause referred to in its said order and in said
83a petition, modified said order by postponing the date on or before which commencement of construction by petitioner was and is required by the terms of said order from July 1, 1930, to January 1, 1931, and that said order of the said Interstate Commerce Commission complained of in said petition was not changed or modified in any other respect.

III

That on the 20th day of December, 1930, without the taking of any further testimony in said cause referred to in said order and in said petition, the said Interstate Commerce Commission again modified its said order as follows and in no other respects, to wit:

"Upon further consideration of the record and request of the United States District Court, District of Oregon, in which is pending the case of Oregon-Washington Railroad & Navigation Company *v.* United States, E-9113:

"It is ordered that the order entered in this proceeding on December 3, 1929, which required that construction of the extension be commenced on or before July 1, 1930, which date was subsequently postponed to January 1, 1931, be, and it is hereby, modified by further postponing said date on or before which construction must be commenced to April 1, 1931."

IV

That the matters complained of by petitioner in its said petition are in no respect changed or affected by its said order of December 20, 1930, and petitioner and its properties remain exposed without remedy with respect thereto, all and singular as alleged in its said petition, unless it receive the relief prayed for in said petition.

Wherefore, petitioner prays that a decree be entered herein setting aside, annulling and suspending said order of the Interstate Commerce Commission, as so modified, and that the defendant, its officers and agents, be perpetually enjoined from enforcing or at-
84a tempting to enforce said order; that the defendant and its officers and agents be perpetually enjoined from instituting or prosecuting any action or proceeding to recover any penalty or penalties from the petitioner by reason of its refusal or neglect to comply with said order of the Interstate Commerce Commission, as so modified; that the said provision in paragraph 21 of section 1 of the interstate commerce act concerning the extension of the line or lines of carriers by railroad subject to said act as construed and applied by said Commerce Commission as more fully appears in said petition and in Exhibit B thereto attached be declared unconstitutional and void, and that petitioner have such other and further relief in the premises as justice and equity may require.

OREGON-WASHINGTON RAILROAD
& NAVIGATION COMPANY,
By J. P. O'BRIEN, *General Manager.*

HENRY W. CLARK,
J. M. BUGBY,
ARTHUR C. SPENCER,
ROY F. SHIELDS,
Its Attorneys.

85a [*Duly sworn to by J. P. O'Brien; jurat omitted in printing.*]

[File endorsement omitted.]

86a [Omitted.]

87a In United States District Court

[Title omitted.]

Order granting Southern Pacific Company leave to intervene as party plaintiff

Filed September 16, 1930

This cause coming on to be heard upon the verified petition of Southern Pacific Company for leave to intervene herein, and the

court having read the same and finding the allegations of the petition with respect to the right to intervene to be true, and being fully advised in the premises, and good cause appearing therefor,

It is ordered, adjudged, and decreed, that the prayer of said petitioner, Southern Pacific Company, for leave to intervene be, and the same is hereby granted, and that said petition, Southern Pacific Company, be and it hereby is given leave to intervene herein and to serve and file its petition in intervention, and that it be and it hereby is made a party plaintiff to this suit, with the right hereafter to participate therein as fully and with the same effect as if it had been named as a plaintiff in the petition or bill of complaint in this suit.

Dated, this 16th day of September, 1930.

R. S. BEAN, *Judge.*

[Filed endorsement omitted.]

88a [Omitted.]

89a In United States District Court

[Title omitted.]

Petition in intervention of Southern Pacific Company

Filed September 18, 1930

To the Honorable Judges of the District Court of the United States for the District of Oregon:

Your petitioner, Southern Pacific Company, files this, its petition in intervention, in the above-entitled court and cause, to enjoin, set aside, and annual an order of the Interstate Commerce Commission, made and entered in docket No. 19680, on December 3, 1929, and in support of its petition your petitioner respectfully alleges and shows:

I

Heretofore and on, to wit, the 24th day of May, 1927, the Public Service Commission of Oregon filed its complaint with the Interstate Commerce Commission, naming as defendants, among others, your petitioner, Southern Pacific Company, and Central Pacific Railway Company. In and by said complaint said Public Service Commission of Oregon prayed for an order requiring one or more of the defendants named in said complaint to construct a line of railroad between Crane or Harriman, Oregon, on the east, and Crescent Lake or some adjacent point on the line operated by the Southern Pacific Company, on the west; that said cause was heard before said Interstate Commerce Commission, and on the 3rd day of December, 1929, said commission made and entered its report and order in said cause, known as docket No. 19680, by the terms of which

order Oregon-Washington Railroad & Navigation Company,
90a the petitioner herein, was required to construct 185 miles of railroad through central Oregon from a point on the Ontario-Burns line of railroad of said Oregon-Washington Railroad & Navigation Company, to a connection with the Cascade line of this intervener at or near Crescent Lake, Oregon.

II

This intervener was a party in interest to said docket No. 19680 before the Interstate Commerce Commission, in which said order of December 3, 1929, was made, and this intervener was and is interested in the controversy before the Interstate Commerce Commission, and was and is interested in this suit brought by the Oregon-Washington Railroad & Navigation Company against the United States of America to set aside, annul, and suspend said order. Southern Pacific Company files this, its petition in intervention, under the authority of section 5 of the act of Congress of June 18, 1910 (36 Statutes at Large, p. 543), as affected by the act of Congress of October 22, 1913 (38 Statutes at Large, p. 220), and the act of Congress of March 3, 1911 (36 Statutes at Large, pp. 1150 and 1151).

III

During all the times herein mentioned your intervener has been and is now a corporation organized and existing under laws of the State of Kentucky, engaged, pursuant to its charter powers, in operating railroads in the State of Oregon and in other States and among the States of the United States. That of the lines of railroad operated by it, as aforesaid, there have been and are, among others:

(a) A main line from Portland, Oregon, via Eugene and Ashland to Oakland and San Francisco, California, known as the "Siskiyou Line."

(b) A second main line from Portland, Oregon, via Eugene and Klamath Falls to Oakland and San Francisco, California, known as the "Cascade Line."

(c) A main line from Oakland, California, via Sacramento, California, to Ogden, Utah.

(d) A main-line route from western Oregon via routes (a) and (b) connecting with route (c) at Roseville, California, and proceeding thence to Ogden, Utah.

(e) A main line from Klamath Falls, Oregon, to Fernley, Nevada, a station on route (c) known as the "Klamath Falls-Alturas" line.

91a IV

That of the railroad mileage operated by said Southern Pacific Company, as has been hereinbefore alleged, a substantial part thereof has been, during the times herein referred to, and is now, owned by

Central Pacific Railway Company, a corporation organized and existing under and by virtue of the laws of the State of Utah; that nearly all of the outstanding capital stock of said Central Pacific Railway Company is owned by your intervener, Southern Pacific Company, and all of the railroad mileage of said Central Pacific Railway Company is now and has been, during all of the times herein mentioned, under lease, dated March 3, 1923, and expiring December 31, 1984, to your intervener, Southern Pacific Company.

V

That during and prior to the year 1923, Central Pacific Railway Company owned a line of railroad extending from a connection with the Southern Pacific Company's railroad at Natron, Oregon, near Eugene, in a southeasterly direction to Oakridge, a distance of 34 miles, and another line extending from a connection with the Southern Pacific Company's railroad at Weed, California, in a northerly direction 127 miles to Kirk; that in the years 1923 to 1926 said Central Pacific Railway Company constructed its railroad connecting said two lines between Oakridge and Kirk, and in order to improve said line between Natron and its connection at Weed, California, said company constructed as a part of said main line a railroad from a point four miles south of Weed station in a general northeasterly direction to a point on its said Klamath Falls line near Grass Station, all in Siskiyou County, California, and said line was promptly placed in operation and during all of said times has been and is now operated by said Southern Pacific Company under said lease as aforesaid; that one of the principal inducing causes for the construction of said line of railroad from Natron through Klamath Falls to said point of connection south of Weed was to secure to said Southern Pacific Company for operation between Oregon and California points an alternate main line with lighter grades and less curvature and distance than obtained on the said first main line of the Southern Pacific Company above described, and also to enable said Southern Pacific Company more efficiently and economically to handle and transport through western Oregon traffic with California and with the East through the Ogden interchange with the Union Pacific Railroad Company, and to encompass and en-
92a joy the vast timber resources on the Cascade Range of mountains and on the easterly slope of same.

VI

That pursuant to authority granted to it by the Interstate Commerce Commission in May, 1926, Southern Pacific Company thereupon acquired control of the capital stock of the Nevada-California-Oregon Railway, a corporation owning and operating a narrow-gauge line of railroad from Lakeview, Oregon, to a connection with

the Central Pacific Railway Company's line of railroad at Wendel, California, and concurrently with the said acquisition of said control by the Southern Pacific Company the Central Pacific Railway Company obtained authority from the said Interstate Commerce Commission to construct and operate a line of railroad from a connection with its said Cascade line at Klamath Falls to a connection with said Nevada-California-Oregon Railway line at Alturas in northern California, a distance of 98 miles, and pursuant to said authority received by said Central Pacific Railway Company in May, 1926, it proceeded to and did construct said line of railroad from Klamath Falls to Alturas, and in the meantime and prior to the making of the order of the Interstate Commerce Commission herein complained of, Southern Pacific Company reconstructed said line of railroad of said Nevada-California-Oregon Railway and standardized the gauge of same between Lakeview, Oregon, and Wendel, California, and connected said Nevada-California-Oregon Railway with said Klamath Falls-Alturas line of railroad; that the cost to December 31, 1929, of the lines constructed and acquired in connection with said Klamath Falls-Alturas line, including the cost of bringing the acquired lines up to the standards of Southern Pacific Company, is approximately $16,000,000.00; that prior to said construction of said Klamath Falls-Alturas railroad line and the reconstruction of said Lakeview-Wendel railroad line, and since the year 1913, railroad traffic between points Ogden and east and western Oregon originating at or destined to points on Southern Pacific lines in western Oregon or lines tributary thereto was routed by said Southern Pacific Company through Roseville, California, and the principal consideration inducing Southern Pacific Company to cause the construction of said Klamath Falls-Alturas line and to effect the acquisition and reconstruction of the Lakeview-Wendel line was to obtain a more direct, efficient, and economical route for the handling of said transcontinental western Oregon business than the route afforded via Roseville, all of which said Interstate Commerce Commission recognized and acted upon
92a in granting authority to said Central Pacific Railway Company for the acquisition of said control of said Nevada-California-Oregon Railway and for the construction of said Klamath Falls-Alturas line and the reconstruction of said Nevada-California-Oregon line; that the route afforded by Southern Pacific Company for said transcontinental business between western Oregon and points Ogden and east via said Cascade line, Klamath Falls, Alturas, Wendel, and Ogden line is, between western Oregon points and eastern points, a direct and efficient route and one not unreasonably long as compared with the route via the proposed Cross-State line ordered to be built by the order under attack in this suit; that shipments moving via said existing route between western Oregon and eastern points move on a schedule as favorable and expeditious as could be afforded by the proposed Cross-State line.

VII

That on the Oregon lines of your intervener, Southern Pacific Company, originates a large part of the railroad traffic moving to and from western Oregon; that the capital investment of your intervener in its Oregon lines is approximately $150,000,000.00; that the operations of said Oregon lines for several years last past have resulted in a net return on the investment therein of less than one per cent per annum; that upon the trial of docket 19680 the year 1926 was agreed upon by all of the parties to said proceedings as representative of the operations of said Southern Pacific lines in Oregon; that during said year 1926 there were originated on said lines in Oregon 183,478 carloads of traffic, including shipments for both intrastate and interstate movement; of that number 151,876 carloads, or 82.7 per cent of the total, consisted of forest products, 11,555 carloads, or 6.3 per cent, consisted of agricultural products; 3,644 carloads, or 2 per cent, consisted of animals and animal products; 12,096 carloads, or 6.6 per cent, consisted of miscellaneous and manufactured products, and 4,346 carloads, or 2.4 per cent, were products of mines, consisting for the most part of gravel and rock for highway construction; of said total carloads originated as aforesaid 150,180, or 82 per cent of the total, moved locally to destination points on Southern Pacific Company lines or to points on connecting lines in territories that would not be reached by the proposed cross-State line involved herein; that upon said hearing before said Interstate Commerce Commission complainant classified as transcontinental all Oregon traffic, both east and west bound, originating with Southern Pacific lines in Oregon or received by said lines, destined to or
94a originating in territory east of the Oregon-Idaho or of the Washington-Idaho State boundary line or beyond the Nevada-Utah boundary line or to the south of the boundary line between New Mexico and Texas; that the total of said transcontinental traffic for said year 1926 via all routes and gateways amounted to 37,386 carloads, or 1,093,485 tons, of which 82.26 per cent consisted of forest products, 8.28 per cent consisted of agricultural products, 7.23 per cent consisted of miscellaneous and manufactured products, 2.18 per cent consisted of the products of mines, and .05 per cent consisted of livestock; of this traffic 33,434 cars (or 89.43 per cent) of the carloads and 1,008,174 tons (or 92.2 per cent of the tonnage) moved eastbound, but only 3,952 cars (or 10.57 per cent) of the carloads and 85,284 tons (or 7.8 per cent of the tonnage) moved westbound; that of said 37,386 carloads, 5,710 cars originated or were received in Klamath County and of said Klamath County traffic 5,364 cars originated in the county and moved east, while 346 cars originated in the east and were received in said county, and the balance of said total of 37,386 carloads or 31,676 cars originated and were received in western Oregon, divided 27,070 cars originating in western Ore-

gon and moving east and 3,606 cars received in western Oregon from the east; that since the completion of construction of said Klamath Falls-Alturas line and the placing of the same in operation on September 15, 1929, your intervener has routed and will continue to route the eastbound transcontinental traffic originating in western Oregon on its line of railroad over its Klamath Falls-Alturas line so as to retain the long haul on said traffic to its own rails wherever possible; that unless your intervener retains the long haul on said eastbound transcontinental traffic originating on its line for said Klamath Falls-Alturas line, the capital investment made by it in the construction and acquisition of said line will prove to be an unremunerative one; that the diversion of any considerable part of said traffic to the proposed cross-State line would necessarily render the investment of your intervener in said Klamath Falls-Alturas line unremunerative, and that your intervener will, so far as it legally may, retain the long haul on such traffic for its Klamath Falls-Alturas line in order to preserve the earning capacity of the investment made by it therein.

VIII

A through route for eastbound transcontinental traffic originating on the lines of your intervener in western Oregon and moving by way of its Klamath Falls-Alturas line to Fernley, Nevada, thence
95a on the San Francisco-Ogden main line of your intervener to Ogden and points east, is a through route which is practicable and not unreasonably long as compared with a through route for such traffic made up of a movement from points of origin on the lines of your intervener in western Oregon to the point of intersection with the Cascade line of your intervener of said proposed cross-State line and thence on said proposed cross-State line over the rails of the Oregon-Washington Railroad & Navigation Company and its connections to eastern transcontinental territory, and for that reason your intervener can not be compelled to establish with Oregon-Washington Railroad & Navigation Company a through route and joint rates for the transportation of passengers or freight from points of origin on its lines in western Oregon over your intervener's lines and said proposed cross-State line. The construction of said proposed cross-State line would result in an attempt being initiated to compel the establishment of such through route and such joint rates with resulting litigation and economic loss, and with consequent destruction of the capital investment of your intervener in said Klamath Falls-Alturas line were such through route and joint rates established by process of law or consequent destruction of the capital investment of Oregon-Washington Railroad & Navigation Company in said proposed cross-State line were the establishment of such through route and joint rates denied, and said proposed cross-State line thereby deprived of the eastbound transcontinental traffic originating on

the lines of your intervener in western Oregon, the movement of which over said proposed cross-State line alone affords any possible pretense for justifying its construction.

IX

That the traffic interchanged between your intervener and the Union Pacific Railroad Company at Ogden, Utah, has for many years last past and does now and will continue to preponderate heavily eastbound, and this is particularly true with respect to western Oregon traffic interchanged at said connection. That to the extent traffic eastbound and westbound can be balanced substantial savings in railroad operating cost can be effected as compared with traffic that is substantially unbalanced in direction, and as the traffic movement preponderates and increases in one direction as against the other substantially increased operating costs are necessarily incurred. That while westbound traffic received by the Southern Pacific Company at Ogedon and destined to western Oregon is small as compared with the movement of traffic originating in west-
96a ern Oregon and delivered to the Union Pacific Railroad Company at Ogden, the loss of said westbound traffic will increase the unbalanced traffic condition now obtaining at Ogden. That said westbound traffic is and will continue to be too small in volume to contribute to a substantial extent to the support of the proposed cross-State line, but the loss of same by its diversion to said proposed cross-State line will be to the disadvantage of your intervener in the operation of its said line from Ogden through Alturas and Klamath Falls to western Oregon, and such loss, if sustained, would contribute to rendering its investment in its Klamath Falls-Alturas line unremunerative.

X

That the said order of said Interstate Commerce Commission herein complained of was and is arbitrary, unreasonable, unlawful, and void, inasmuch as said proposed cross-State line ordered to be constructed by said Interstate Commerce Commission is not reasonably required in the interest of public convenience and necessity, and the finding of said Interstate Commerce Commission in its report in said cause "that an extension of the rail line of the Oregon-Washington Railroad & Navigation now terminating at or near Burns, Oregon, from or near a station thereon, designated as Crane, Oregon, to a connection with the Cascade line of the Southern Pacific at or near Crescent Lake, Oregon, by the Oregon-Washington Railroad & Navigation Company is reasonably required in the interest of public convenience and necessity" was and is wholly unsupported by the evidence in said cause, docket No. 19680, and said finding was and is contrary to the evidence taken in said cause and that the evidence and the record therein affirmatively show that said proposed

line is not reasonably required in the interest of public convenience and necessity.

XI

That said Interstate Commerce Commission was and is without power and jurisdiction to require by the order under attack in this suit the construction by Oregon-Washington Railroad & Navigation Company of said proposed cross-State line; that the power assumed by said Interstate Commerce Commission transcends the power of regulation granted to it by law, and in making and entering said order said Interstate Commerce Commission acted arbitrarily and contrary both to the express provisions and manifest intent of said interstate commerce act and beyond its powers under said act
97a and beyond the powers which could be granted to it by Congress under the Constitution of the United States.

Wherefore, your intervener prays that a decree be entered herein setting aside, annu'lling and suspending said order of the Interstate Commerce Commission hereinbefore set forth, and that the defendant, its officers and agents, be perpetually enjoined from enforcing or attempting to enforce said order.

SOUTHERN PACIFIC COMPANY,
By BEN C. DEY,
GUY V. SHOUP,
ALFRED A. HAMPSON,
Its Solicitors.

[*Duly sworn to by Alfred A. Hampson; jurat omitted in printing.*]

98a STATE OF OREGON,
County of Multnomah, ss:

I, Alfred A. Hampson, being first duly sworn, depose and say that I am one of attorneys for Southern Pacific Company, intervener in the within action; that I served the within petition in intervention and order of September 16, 1930, permitting said petition in intervention to be filed, upon

The United States of America, by depositing in the post office at Portland, Oregon, on September 18, 1930, an envelope with postage prepaid, addressed to Elmer B. Collins, special assistant to the Attorney General, Washington, D. C., % Department of Justice;

The Interstate Commerce Commission, by depositing in the post office at Portland, Oregon, on September 18, 1930, an envelope with postage prepaid, addressed to J. Stanley Payne, assistant chief counsel, Washington, D. C., % Interstate Commerce Commission;

The Public Utilities Commission of Idaho, by depositing in the post office at Portland, Oregon, on September 18, 1930, an envelope with postage prepayed, addressed to W. D. Gillis, attorney general, State of Idaho, Boise, Idaho.

That each of said envelopes contained a copy of the within petition in intervention and a copy of said order, each having been duly certified to by me to be a true and correct copy of the originals.

ALFRED A. HAMPSON.

Subscribed and sworn to before me this 18th day of September, 1930.

[NOTARIAL SEAL.] DAISY STOCKTON,
Notary Public for Oregon.

My commission expires March 6, 1934.

STATE OF OREGON,
County of Multnomah, ss:

Due service of the foregoing petition in intervention by Southern Pacific Company and of the order of September 16, 1930, permitting said petition in intervention to be filed, is hereby admitted at Portland, Oregon, this 18th day of September, 1930.

A. C. SPENCER,
ROY F. SHIELDS,
Attorneys for Oregon-Washington Railroad & Navigation Company, Petitioner.

STATE OF OREGON,
County of Multnomah, ss:

Due service of the foregoing petition in intervention by Southern Pacific Company and of the order of September 16, 1930, permitting said petition in intervention to be filed, is hereby admitted at Portland, Oregon, this 18th day of September, 1930.

WILLIAM C. MCCULLOCH,
Attorney for Public Service Commission of Oregon.

[File endorsement omitted.]

99a [Omitted.]

100a In United States District Court

[Title omitted.]

Petition of Public Service Commission of Oregon and of the Public Utilities Commission of the State of Idaho for leave to intervene

Filed September 10, 1930

To the Honorable Judges of the District Court of the United States for the District of Oregon:

Come now your petitioners, and respectfully represent that they have an interest in the matters in controversy in the above-entitled suit and desire to intervene therein and to become parties thereto and for grounds of the proposed intervention say:

1. That your petitioner, the Public Service Commission of Oregon, is and for approximately twenty-three years last past has been a

duly and regularly created and existing department of the State government of the State of Oregon under and by virtue of the laws of said State and vested by the laws of said State with certain powers and charged by the laws of said State with divers duties in respect of the regulation of railroads and of other common carriers and of public utilities and of their rates, fares, charges, service, facilities, rules, regulations, and practices in their operations within the State of Oregon, and that your petitioner, the Public Service Commission of Oregon, is composed of three commissioners each of whom is a citizen, resident, and inhabitant of the State of Oregon

101a and that the location, office, and place of business of your petitioner, the Public Service Commission of Oregon, are in the city of Salem, in the State of Oregon, and that your petitioner, the Public Service Commission of Oregon, is and at all said times has been authorized and directed by law to file complaints with the Interstate Commerce Commission in the interest of the public.

2. That your petitioner, the Public Utilities Commission of the State of Idaho, is a duly appointed, qualified, and acting body, established under and by virtue of the laws of the State of Idaho, with its office in the State capitol, Boise, Idaho, and vested with the power and charged with the duty of investigating all existing or proposed interstate rates, fares, tolls, charges, and classifications, for and in relation to the transportation of persons or property, where any act in relation thereto shall take place within the said State, and is charged with the duty of representing in an action before the Interstate Commerce Commission shippers, distributors, purchasers, and consumers of the commodities shipped by freight thereunder, when said rates, fares, tolls, charges, or classifications are excessive or discriminatory and in violation of the act of Congress entitled, "An act to regulate commerce," approved February 4, 1887, and the acts amendatory thereof and supplementary thereto.

3. That on May 24, 1927, your petitioner, the Public Service Commission of Oregon, filed with the Interstate Commerce Commission the complaint which is referred to in Article II of the petition in the above-entitled suit and a copy of which, marked "Exhibit A," is attached to such petition on pages 53 to 56 thereof, both inclusive, and that said complaint was numbered 19680 on the docket of the Interstate Commerce Commission.

4. That thereafter your petitioner, the Public Utilities Commission of the State of Idaho, sought and obtained leave from the Interstate Commerce Commission to intervene in support of the complaint docketed as number 19680 as aforesaid, and thereupon participated actively in all the subsequent proceedings before the Interstate Commerce Commission in said docket numbered 19680.

102a 5. That thereafter your petitioner, the Public Service Commission of Oregon, brought on for hearing before the Interstate Commerce Commission its said complaint and thereupon such proceedings were had before the Interstate Commerce Commission as resulted in the making and entry by the Interstate Commerce

Commission on December 3, 1929, of a report and order in said docket No. 19680, a copy of which report and order, marked "Exhibit B," is attached to the petition in the above-entitled suit, and that by such report and order the Interstate Commerce Commission granted to your petitioner, the Public Service Commission of Oregon, substantially the relief sought by your petitioner, the Public Service Commission of Oregon, in and by its said complaint.

6. That the object of the litigation embraced in the above-entitled suit is a decree of this court perpetually enjoining the defendant, its officers and agents, from enforcing or attempting to enforce said order of the Interstate Commerce Commision in its said docket No. 19680 and setting aside, annulling, and suspending the same and perpetually enjoining the defendant and its officers and agents from instituting and prosecuting any action or proceeding to recover any penalty or penalties from the petitioner in the above-entitled suit by reason of its refusal or neglect to comply with said order of the Interstate Commerce Commission, and declaring unconstitutional and void that certain provision in paragraph 21 of section 1 of the interstate commerce act concerning the extension of the line or lines of carriers by railroad subject to said act as construed and applied by the Interstate Commerce Commission in its report and order in said docket No. 19680, and that the granting by this court of the relief sought by the petitioner in the above-entitled suit would wholly destroy and nullify the relief granted and accorded to your petitioner, the Public Service Commission of Oregon, by the Interstate Commerce Commission in and by its said order in said docket No. 19680.

7. That the interest of your petitioners in the litigation that is embraced in the above-entitled suit is to aid and to
103a support the defendant in defending and maintaining the lawfulness of said order of the Interstate Commerce Commission in its said docket No. 19680 and the constitutionality of paragraph 21 of section 1 of the interstate commerce act concerning the extension of the line or lines of carriers by railroad subject to said act as construed and applied by said Interstate Commerce Commission in its said order.

8. That section 212 of the Judicial Code provides "that the Interstate Commerce Commission and any party or parties in interest to the proceeding before the commission in which an order or requirement is made may appear as parties thereto of their own motion and as of right and be represented by their counsel in any suit wherein is involved the validity of such order or requirement or any part thereof, and the interest of such party; and the court wherein is pending such suit may make all such rules and order as to such appearances and representations, the number of counsel, and all matters of procedure, and otherwise, as to subserve the ends of justice and speed the determination of such suits: Provided further, That communities, associations, corporations, firms, and indi-

viduals who are interested in the controversy or question before the Interstate Commerce Commission, or in any suit which may be brought by any one under the provisions of this chapter, or the acts of which it is amendatory or which are amendatory of it, relating to action of the Interstate Commerce Commission, may intervene in said suit or proceedings at any time after the institution thereof; and the Attorney General shall not dispose of or discontinue said suit or proceeding over the objection of such party or intervenor aforesaid, but said intervenor or intervenors may prosecute, defend, or continue said suit or proceeding unaffected by the action or non-action of the Attorney General therein."

9. That section 213 of the Judicial Code provides that "Complainants before the Interstate Commerce Commission interested in a case shall have the right to appear and be made parties to the case and be represented before the courts by counsel, under such regu-
104a lations as are now permitted in similar circumstances under the rules and practice of equity courts of the United States."

10. That rule 37 of the rules of practice in equity provides that "anyone claiming an interest in the litigation may at any time be permitted to assert his right by intervention, but the intervention shall be in subordination to and in recognition of the propriety of the main proceeding."

11. That the intervention of your petitioners as parties defendant in this suit is reasonably necessary to protect their interests and the interest of the States of Oregon and of Idaho, and of the citizens thereof, in whose behalf this petition for leave to intervene is filed, and will not enlarge the scope of the issues tendered by the petition therein or vary the same.

Wherefore your petitioners pray for an order granting them leave to intervene in this suit and to serve and to file their answer (herewith exhibited) and making them parties defendant to this suit with the right thereafter to participate therein as fully and with the same effect as if they had been named as defendants in the petition herein, and according them such further relief as may be meet and proper in the premises, and your petitioners as in duty bound will ever pray.

I. H. VAN WINKLE,
Attorney General of Oregon,
WILLIAM P. ELLIS,
WILLIAM C. MCCULLOCH,
Solicitors for Public Service, Commission of Oregon,
Petitioner for Leave to Intervene.
W. D. GILLIS,
Attorney General of the State of Idaho,
J. M. THOMPSON,
Solicitors for the Public Utilities
Commission of the State of Idaho,
Petitioner for Leave to Intervene.

105a [*Duly sworn to by Frank J. Miller and J. M. Thompson; jurats omitted in printing.*]
[File endorsement omitted.]

106a [Omitted.]

107a In United States District Court

[Title omitted.]

Order granting leave to intervene

Filed Sept. 10, 1930

This cause coming on to be heard upon the verified petition of Public Service Commission of Oregon and of Public Utilities Commission of the State of Idaho for leave to intervene herein as parties defendant, and the court having read the same and finding the allegations of the petition to be true and having examined the answer tendered for service and filing by said petitioners and being fully advised in the premises, and good cause appearing therefor, it is

Ordered, adjudged, and decreed that the prayer of said petitioners for leave to intervene be and the same is hereby granted and that said petitioners be and they are given leave hereby to intervene herein and to serve and to file their answer and that they be and they are hereby made parties defendant to this suit with the right hereafter to participate therein as fully and with the same effect as if they had been named as defendants in the petition or bill of complaint in this suit.

Done this 10th day of September, 1930.

By the court:

[File endorsement omitted.]

R. S. BEAN, *Judge.*

108a [Omitted.]

109a In United States District Court

[Title omitted.]

Intervention of Interstate Commerce Commission

Filed Aug. 25, 1930

To the Honorable Judges of Said Court:

In accordance with the provisions of section 212 of the Judicial Code (36 Stat. L. 1150; section 45a, title 28, U. S. Code, Supplement

III), we hereby enter the appearance of the Interstate Commerce Commission as a party defendant, and of ourselves as its counsel, in the above-entitled suit.

DANIEL W. KNOWLTON,
Chief Counsel.
J. STANLEY PAYNE,
Assistant Chief Counsel.

[File indorsement omitted.]

110a [Omitted.]

111a In United States District Court

[Title omitted.]

Order granting Great Northern Railway Company, Oregon Trunk Railway, and Oregon Electric Railway Company leave to intervene

Filed Sept. 26, 1930

This cause coming on to be heard upon the verified petition of Great Northern Railway Company, a corporation, Oregon Trunk Railway, a corporation, and Oregon Electric Railway Company, a corporation, for leave to intervene herein, and the court having read the same and finding the allegations of the petition with respect to the right to intervene to be true, and being fully advised in the premises, and good cause appearing therefor,

IT IS ordered, adjudged, and decreed that the prayer of said petitioners, Great Northern Railway Company, a corporation, Oregon Trunk Railway, a corporation, and Oregon Electric Railway Company, a corporation, for leave to intervene, be, and the same is hereby, granted, and that said petitioners be, and they are hereby, given leave to intervene herein and to serve and file their petition in intervention, and that said interveners be made parties plaintiff to this suit, with the right hereafter to participate therein as fully and to the same effect as if said interveners had been named as
112a plaintiffs in the petition or bill of complaint in this suit.

Dated, this 26 day of September, 1930.

R. S. BEAN, *District Judge.*

[File indorsement omitted.]

113a [Omitted.]

114a In United States District Court

[Title omitted.]

Petition in intervention of Great Northern Railway Company, a corporation; Oregon Trunk Railway, a corporation; and Oregon Electric Railway Company, a corporation

Filed September 26, 1930

To the Honorable Judges of the District Court of the United States for the District of Oregon:

Your petitioners, Great Northern Railway Company, a corporation; Oregon Trunk Railway, a corporation; and Oregon Electric Railway Company, a corporation, file this their petition in intervention in the above-entitled court and cause, to adjoin, set aside, and annul an order of the Interstate Commerce Commission, made and entered in docket No. 19680, on December 3, 1929, and in support thereof your petitioners respectfully allege and show:

I

Heretofore and on the 24th day of May, 1927, the Public Service Commission of Oregon filed its complaint with the Interstate Commerce Commission, naming as defendants, among others, your petitioners, Great Northern Railway Company, a corporation; Oregon Trunk Railway, a corporation; and Oregon Electric Railway Company, a corporation. In and by said complaint said Public
115a Service Commission of Oregon prayed for an order requiring one or more of the defendants named in said complaint to construct a line of railroad between Crane or Harriman, Oregon, on the east, and Crescent Lake or some adjacent point on the line operated by the Southern Pacific Company, on the west; that said cause was heard before said Interstate Commerce Commission, and on the 3rd day of December, 1929, said commission made and entered its report and order in said cause, known as docket No. 19680, by the terms of which order Oregon-Washington Railroad & Navigation Company, the petitioner herein, was required to construct 185 miles of railroad through central Oregon from a point on the Ontario-Burns line of railroad of said Oregon-Washington Railroad & Navigation Company to a connection with the Cascade line of Southern Pacific Company at or near Crescent Lake, Oregon.

II

These interveners were parties in interest to said docket No. 19680 before the Interstate Commerce Commission in which said order of December 3, 1929, was made, and these interveners were and are

interested in the controversy before the Interstate Commerce Commission, and were and are interested in this suit brought by the Oregon-Washington Railroad & Navigation Company against the United States of America to set aside, annul, and suspend said order. These interveners file this their petition in intervention under the authority of section 5 of the act of Congress of June 18, 1910 (36 Statutes at Large, p. 543), as affected by the act of Congress of October 22, 1913 (38 Statutes at Large, p. 220), and the act of Congress of March 3, 1911 (36 Statutes at Large, pp. 1150 and 1151).

III

During all the times herein mentioned your intervener Great Northern Railway Company has been and now is a corporation organized under the laws of the State of Minnesota, your
116a intervener Oregon Trunk Railway has been and is now a corporation organized under the laws of the State of Washington, and your intervener Oregon Electric Railway Company has been and is now a corporation organized and existing under the laws of the State of Oregon. Interveners have been engaged and are now engaged, pursuant to charter powers, in operating railroads in interstate commerce.

IV

All of the capital stock of intervener Oregon Trunk Railway, and substantially all of the capital stock of Oregon Electric Railway Company, is owned and held by Spokane, Portland and Seattle Railway Company, a Washington corporation; and all of the capital stock of said Spokane, Portland and Seattle Railway Company is owned jointly and equally by Great Northern Railway Company and Northern Pacific Railway Company.

V

Pursuant to authority granted by the Interstate Commerce Commission in its finance docket No. 4810 and related cases, intervener Great Northern Railway Company has constructed a line of railroad from a point near Bend, Oregon, to a connection with the Cascade line of the Southern Pacific Company at Chemult, Oregon, and has acquired the right to use said Cascade line of the Southern Pacific Company between Chemult and Klamath Falls, Oregon. By contracts duly approved by the Interstate Commerce Commission said intervener has also acquired the right to operate its trains over the lines of Oregon Trunk Railway and Spokane, Portland and Seattle Railway Company between Spokane, Washington, and Bend, Oregon, and between Portland, Oregon, and Bend, Oregon, and there has thus been established a through route for the transportation of transcontinental traffic between Klamath Falls and all points served by

said intervener and its connections. Said new through route is adequate in all respects to serve said Klamath territory.

117a In finance docket No. 7439 of the Interstate Commerce Commission intervener Great Northern Railway Company has been authorized to construct and is now engaged in constructing a line of railroad from Klamath Falls southerly to a connection with a line of railroad duly authorized and now under construction by Western Pacific Railway Company. Said construction when completed will result in a new through route formed by the lines of said intervener and said Western Pacific Railway Company between California on the southwest and the entire northwestern country.

VI

The main line of intervener Oregon Electric Railway Company between Portland, Oregon, and Eugene, Oregon, traverses the Willamette Valley, and said line, together with the line of its parent company, Spokane, Portland and Seattle Railway Company, between Portland, Oregon, and Spokane, Washington, and with the lines of the latter's parent companies, Northern Pacific Railway Company and Great Northern Railway Company, forms a through route for transportation of the products of western Oregon, which are in large part forest products, to the natural markets for such products in transcontinental territory. For a number of years last past intervener Oregon Electric Railway Company has earned no return upon the investment in its line of railroad.

For the purpose of enabling it to participate to a greater extent in the transportation of said forest products from western Oregon to eastern transcontinental territory, intervener Oregon Electric Railway Company has secured authority to construct, and is now constructing, an extension of its line of railway (in connection with joint user of Southern Pacific line between Albany and Lebanon, Oregon) from Albany easterly into timbered areas in Linn County, Oregon. Authority for such construction was granted in finance docket No. 6765 of the Interstate Commerce Commission. Intervener Oregon Electric Railway Company has also applied for certificates authorizing the construction of an extension of

118a its line southwesterly from Eugene, and for permission to connect with and to acquire the properties of Valley and Siletz Railway Company extending westerly from Independence, Oregon, to Valsetz, Oregon.

VII

The main line of intervener Oregon Trunk Railway extending from Wishram, Washington, to Bend, Oregon, serves a substantial portion of central Oregon, including Deschutes, Crook, and Jefferson Counties, and said intervener's line, together with the line of its

parent company, Spokane, Portland and Seattle Railway Company, from Wishram to Spokane, Washington, and the lines of the parent companies of said Spokane, Portland and Seattle Railway Company, Northern Pacific Railway Company, and Great Northern Railway Company, forms a through direct route for the transportation of the products of said central Oregon region to eastern transcontinental destinations.

For a number of years last past intervener Oregon Trunk Railway has earned no return upon the investment in its line of railroad.

VIII

The order of the Interstate Commerce Commission requiring the construction of said cross-State line railroad is based in part on evidence and findings that certain of the traffic originating in the Klamath region in Oregon, now moving via the line of intervener Great Northern Railway Company, would be diverted to the said cross-State line, and that certain of the traffic originating in western Oregon would be diverted from the present routes between western Oregon and eastern transcontinental destinations, to the proposed cross-State line, and that a substantial portion of the territory served by intervener Oregon Trunk Railway would be tributary to the proposed cross-State line, and that products thereof,
119a particularly forest products, which now move or which in the future may move via intervener Oregon Trunk Railway's line and its connections, will be diverted to the proposed cross-State line.

Interveners represent and allege that the traffic originating in the territories served by their respective lines is not now adequate to support said lines or to enable them to earn a fair return upon the capital investment involved, and that the diversion to said proposed cross-State line of any of said traffic will be to the disadvantage of interveners in the operation of their respective lines and will contribute to make said investment unremunerative.

IX

Interveners further represent and allege that their said lines, together with said connections forming the through routes described, are in all respects adequate to serve their respective territories, and that additional railroad facilities are not reasonably required in the public interest.

X

Interveners further represent and allege that the Interstate Commerce Commission was and is without power and jurisdiction to require by the order under attack in this suit the construction by

Oregon-Washington Railroad & Navigation Company of said proposed cross-State line; that the power assumed by the Interstate Commerce Commission transcends the power of regulation granted to it by law, and in making and entering said order the Interstate Commerce Commission acted arbitrarily and contrary both to the express provisions and manifest intent of the interstate commerce act, and beyond its powers under said act and beyond the powers which could be granted to it by Congress under the Constitution of the United States.

120a Wherefore, interveners pray that a decree be entered herein setting aside, annulling, and suspending said order of the Interstate Commerce Commission hereinbefore set forth, and that the defendant, its officers and agents, be perpetually enjoined from enforcing or attempting to enforce said order.

GREAT NORTHERN RAILWAY COMPANY,
A Corporation,
OREGON TRUNK RAILWAY,
A Corporation,
OREGON ELECTRIC RAILWAY COMPANY,
A Corporation,
By CHARLES A. HART, *Their Solicitor.*
CAREY, HART, SPENCER & MCCULLOCH,
Of Counsel.

[*Duly sworn to by W. F. Turner; jurat omitted in printing.*]

[File indorsement omitted.]

121a [Omitted.]

122a In United States District Court

[Title omitted.]

Answer of United States of America

Filed July 30, 1930

United States, the defendant, for answer to the petition filed herein against it answers and says:

I

United States admits, for the purposes of this suit, the allegations of the opening paragraph and the following numbered paragraphs of the petition: 1, 2, 3, 4, 5, 9, 15, 16, 17, 18, 19, 20, 21, 24, 26, 27, 28, and 34.

II

For answer to the matters, things, and conclusions alleged in the paragraphs of the petition numbered 6, 7, 8, 10, 11, 12, 13, 14, 22, 23,

25, 29, 30, 31, 32, 33, and 35, United States alleges that, as averred and admitted in said paragraph numbered 35 of the petition, all the facts alleged in the paragraphs just enumerated " appeared upon the hearing of said matter so brought and pending before " said commission and were duly considered and weighed by the commis-
123a sion in connection with all the other facts and circumstances submitted to it at said hearing in reaching the conclusions of fact set forth and appearing in its report (159 I. C. C. 630) attached to the petition and made a part thereof as Exhibit B. United States further alleges that the facts, conclusions, and matters alleged in said paragraphs are evidential, argumentative, and are incompetent, irrelevant, and immaterial to the issues laid by the petition herein, and are facts and matters exclusively for consideration by the commission in its administrative capacity and may not be considered and weighed by this court in determining the legality of said order of the commission, and that said allegations require no answer, and as to them the United States neither admits nor denies. United States denies that the facts alleged in said paragraphs constitute all the pertinent evidence submitted to and considered by the commission and alleges that, in addition to the facts and conclusions averred in said paragraphs, a large volume of other acts were submitted to and were weighed and considered by the commission in rendering its said report and order.

III

For answer to the matters, things, and conclusions alleged in paragraphs numbered 36 to 58, inclusive, of the petition, United States denies that said order of the commission is unreasonable, unlawful, arbitrary, or void for the reasons, or any of them, alleged in those paragraphs, or for any other reasons; and United States denies all and singular the allegations of said paragraphs except as and to the extent only as here admitted.

(a) United States admits that paragraph 21 of section 1 of the interstate commerce act contains the language quoted in paragraph numbered 39 of petition, but respectfully refers the court to the statute itself (41 Stat. L. 494; U. S. C., tit. 49, § 1 (21)) for the complete language of that section.

124a (b) United States admits that the questions, answers, and discussions quoted in said paragraph 42 of the petition occurred and appear in the record before said commission, but denies the inferences and conclusions drawn and alleged in the petition concerning them in said paragraphs.

(c) United States admits that paragraph 4 of section 15 of the Interstate commerce act contains the language quoted in said paragraph numbered 45 of the petition, but denies that said order of the commission violates the provisions of said section.

Further answering the allegations of said paragraphs, United States expressly denies:

(a) The allegation contained in said paragraph 37 that said order of the commission is unsupported by evidence.

(b) The allegation in said paragraph 38 that said order is in excess of the jurisdiction of the commission, or otherwise unlawful.

(c) The allegations in paragraph numbered 53, in substance that the commission "exceeded its jurisdiction and erroneously construed and applied law."

(d) The allegations in paragraph numbered 55, in substance that the result of the interpretation placed upon the law by the commission will be an unlawful appropriatior of petitioner's property.

(e) The allegation in paragraph numbered 56, that paragraph 21 of section 1 of the interstate commerce act as construed and applied by the commission is unconstitutional.

(f) The allegation in paragraph numbered 57 that said order of the commission is supported by no substantial evidence and is unreasonable, arbitrary, unlawful, and void.

(g) The allegation in paragraph numbered 58 that irreparable or other legal injury or loss will result to petitioner from said order of the commission.

125a

IV

With the exception of the allegations expressly admitted in this answer, United States denies each and every allegation contained in the petition, in so far as they are in conflict with the allegations herein, or with the findings and conclusions of fact and law included in said report and order of said commission.

V

Further and affirmatively answering the allegations of the petition, United States alleges that the findings and conclusions set forth and contained in said report of the commission, upon which its said order is based, are fully supported by substantial evidence duly submitted by the parties to the commission; that in making and rendering its report and order the commission accorded all parties, including the petitioner, a full, complete, and adequate hearing; that said order is not in excess of the commission's jurisdiction and is not arbitrary, unlawful, or void, and is not based upon an erroneous construction of law by the commission, and that said paragraph 21 of section 1 of the interstate commerce act, as construed and applied by the commission in making and entering said report and order, does not violate the Constitution of the United States or any of the provisions thereof.

Wherefore having fully answered, United States prays that the relief sought be denied and the petition dismissed with costs to the

petitioner, and that United States have the benefit of such other and further orders, decrees, and relief as may be deemed proper.

ELMER B. COLLINS,
Special Assistant to the Attorney General.

JOHN LORD O'BRIAN,
The Assistant to the Attorney General.

GEORGE NEUNER,
United States Attorney.

126a [Duly sworn to by Elmer B. Collins; jurat omitted in printing.]

UNITED STATES OF AMERICA,
District of Oregon, ss:

Due and legal service of the within answer is hereby admitted and accepted within the State and District of Oregon, on the 30th day of July, 1930, by receiving a copy thereof duly certified to as a true and correct copy of the original by George Neuner, United States attorney for the District of Oregon.

ROY F. SHIELDS,
Of Attorneys for Petitioner.

[File endorsement omitted.]

127a [Omitted.]

128a In United States District Court

[Title omitted.]

Answer of Interstate Commerce Commission

Filed Aug. 25, 1930

The Interstate Commerce Commission, hereinafter called the commission, intervening defendant in the above-entitled suit, now and at all times hereafter saving and reserving to itself all and all manner of benefit and advantage of exception to the many errors and insufficiencies in the petition contained, for answer thereunto, or unto so much or such parts thereof as it is advised that it is material for it to answer, answers and says:

I

Answering the opening paragraph and paragraphs 1, 2, and 3 of the petition, the commission admits for the purposes of this suit that the allegations contained in said paragraphs are true.

129a II

Answering paragraph 4 of the petition, the commission admits and alleges that it made and entered the report and order dated

December 3, 1929, in a proceeding entitled Public Service Commission of Oregon v. Central Pacific Railway Company et al., docket No. 19680, reported at 159 I. C. C. 630, and the commission refers the court to the text of the said report and order for full, complete, and accurate information concerning the contents thereof, and for a full description of the proceedings before the commission upon which said report and order were and are based; that said order required that the construction of the extension of petitioner's line from, or near, a station thereon designated as Crane, Oreg., to a connection with the Cascade line of the Southern Pacific Company at, or near Crescent Lake, Oreg., should be commenced on or before July 1, 1930; but by order dated June 19, 1930, said order of December 3, 1929, was modified by postponing said date on or before which construction of said extension must be commenced to January 1, 1931.

III

Answering paragraph 5 of the petition, the commission admits the allegations therein contained and admits the jurisdiction of this court over the subject matter of this suit.

IV

Answering paragraphs 6 to 37, both inclusive, and paragraphs 48 to 52, both inclusive, of the petition, the commission al-
130a leges that in said proceeding it accorded to the petitioner herein, Oregon-Washington Railroad & Navigation Company, the full hearing provided for by section 1 (21) of the interstate commerce act and that at said hearing a large volume of testimony and other evidence bearing upon the matters covered by said report and order was submitted to the commission for consideration, including testimony and other evidence submitted on behalf of petitioner herein by its counsel, and that at said hearing and subsequently, both orally and in briefs filed in said proceeding, questions relating to said matters were fully argued and submitted to the commission for determination, whereupon the commission determined said matters and entered and served upon the parties to said proceeding the aforesaid report and order, which said report and order included the commission's findings of fact, decisions, conclusions, and requirements in the premises, and that upon the evidence aforesaid, as shown in and by said report, the commission made the findings and stated the conclusions upon which said order is based; that the findings and conclusions in said report were and are, and that each of them was and is, fully supported and justified by the evidence submitted to the commission in said proceeding as aforesaid; that in making said report the commission considered and weighed carefully, in the light of its own knowledge and experience, each fact, circumstance, and condition called to its attention on behalf of the parties in said proceeding by their coun-

sel, including matters covered by the allegations of the petition herein; that said order was not made or entered either arbitrarily or unjustly, or contrary to the relevant evidence, or without evidence, or without evidence to support it, and the commission denies each of and all the allegations to the contrary contained in the petition.

131a

V

Answering paragraphs 38 to 47, both inclusive, and paragraphs 53 to 57, both inclusive, of the petition, the commission denies that said order is either unlawful or void for the reasons, or for any of the reasons, set forth in said paragraphs, denies that in making said order it either exceeded the authority which had been duly conferred upon it or exercised that authority in an unreasonable manner, and denies each of and all the allegations to the contrary contained in the petition. The commission further denies that said order is based upon a misinterpretation of any of the provisions of the interstate commerce act, denies that in making said order it acted beyond the power duly conferred upon it by law, and denies that the enforcement of said order will deprive petitioner of its property without due process of law.

VI

Answering paragraph 58 of the petition, the commission denies that petitioner will suffer either irreparable injury or irreparable damage unless enforcement of said order of December 3, 1929, is enjoined and suspended.

Except as expressly herein admitted, the commission denies the truth of each of and all the allegations contained in the petition in so far as they conflict either with the allegations herein, or with either the statements or conclusions of fact included in said report of December 3, 1929, which said report and the order of the same date are hereby referred to and made a part hereof.

132a All of which matters and things the commission is ready to aver, maintain, and prove as this honorable court shall direct, and hereby prays that said petition be dismissed.

INTERSTATE COMMERCE COMMISSION,
By J. STANLEY PAYNE,
Assistant Chief Counsel.

DANIEL W. KNOWLTON,
Chief Counsel, of Counsel.

[*Duly sworn to by Clyde B. Aitchison; jurat omitted in printing.*]

[File indorsement omitted.]

133a [Omitted.]

134a In United States District Court

[Title omitted.]

Answer of Public Service Commission of Oregon and of Public Utilities Commission of the State of Idaho, intervening defendants, to the petition of the above-named petitioner

Filed Sept. 10, 1930

These intervening defendants (averring that the facts, conclusions, matters, and things alleged in paragraphs 6, 7, 8, 10, 11, 12, 13, 14, 22, 23, 25, 29, 30, 31, 32, 33, and 35 are argumentative, evidential, incompetent, irrelevant and immaterial with relation to the issues tendered by the petition herein and are facts, matters and things exclusively for consideration by the Interstate Commerce Commission in its administrative capacity and may not be considered and weighed by this court in determining the legality of the order of the Interstate Commerce Commission that is involved in this suit but not waiving the benefit of said averment or their rights thereunder by their specific admission, denial, denial for lack of knowledge, or explanation, as hereinafter alleged, of said facts, conclusions, matters and things contained in said paragraphs) for their answer to the petition herein say:

1. Answering Article I:

They aver that the petitioner has several branch lines of railroad in Oregon, Washington, and Idaho and that said branch lines are neither so numerous nor so extensive as to penetrate into or to serve any part of the territory tributary to the "proposed cross-State line" mentioned in Article XIV of the petition, and that the petitioner is the successor of the Oregon Railroad and Navigation Company, which for many years prior to November, 1910, owned and operated main lines of railroad from Portland to
135a Huntington, Oregon, and to Spokane, Washington, and divers branch lines in Oregon, Washington, and Idaho, and except as in this sentence explained they admit the facts alleged in paragraph 1.

They aver that the petitioner's line of railroad from Ontario, Oregon, to Crane, Oregon, is the completed part of the main line of the railroad projected by Oregon Eastern Railway Company about the year 1905 to extend westerly from Ontario, Oregon, to Natron, near Eugene, Oregon; that the original articles of incorporation of the petitioner herein were dated November 23, 1910, and were executed and filed in pursuance of law on or about that date; that section first of Article III thereof declared the enterprise, business, pursuit, or occupation of the petitioner to be "to purchase, acquire, own, hold, construct, complete, equip, maintain, and operate the railroads, railroad property, and telegraph lines hereinafter men-

tioned with their appurtenances and to carry freight and passengers thereon and to receive tolls for such carriage and in all things and in every lawful manner to exercise the powers, privileges, franchises, and functions of a railroad company and of a common carrier in respect to each and all of such lines, to wit:

"18. That part of the railroad and telegraph lines projected and proposed to be constructed by Oregon Eastern Railway Company consisting of (a) a line from Vale across the State of Oregon to a point at or near Odell in said State; (b) a line from a point in Christmas Valley, in the State of Oregon, on said line from Vale to Odell, thence through Silver Lake Valley and through Chewaucan Valley and Goose Lake Valley to a point on the boundary line between California and Oregon in township forty-eight (48) north, range fourteen (14) east of Mt. Diablo meridian; (c) a line from Bend, in said State of Oregon, to Odell in said State"; that Odell, Oregon, is not and never was anything but a name used to designate the westerly terminus of the Oregon Eastern Railway Company's survey of its projected line from Vale westerly across the State of Oregon, and that Crescent Lake, Oregon, which is the proposed western terminus of said cross-State line, is located approximately on the site formerly known as Odell, Oregon; that the petitioner herein on November 8, 1923, by a resolution duly adopted by its board of directors provided for the extension of its line from Crane to Burns and authorized the construction, maintenance, and operation of such extension and therein adopted the said extension as a branch of its existing line of railway; that the petitioner herein on
136a July 11, 1928, and more than one year after the complaint in said docket 19680 was filed with the Interstate Commerce Commission executed and filed in the manner prescribed by law, supplementary articles of incorporation, and thereby amended paragraph 18 aforesaid of section first of Article III of the original articles of incorporation, to read as follows:

"18. The line of railroad and telegraph extending from Vale in Malheur County to Burns in Harney County, both in the State of Oregon"; that Burns, Oregon, is not and never was the designated and intended terminus of said projected main line of railroad; and that the cross-State line shown on the map attached to the petition herein and designated "Exhibit C," the construction of which was ordered and required by the Interstate Commerce Commission in its docket No. 19680, as alleged in paragraph 4 of the petition, was and is the uncompleted portion of said projected main line of railroad. Except as in the foregoing sentence explained they admit the facts alleged in paragraph 2.

2. They admit the facts alleged in Article II.

3. They admit the facts alleged in Article III.

4. Answering Article IV:

They admit the facts alleged in paragraphs 6 and 7.

With respect to paragraph 8:

They admit that limited areas in Malheur County and in Harney County and very limited areas in Lake County are now accessible to existing lines of railroad and are served by such lines and that timbered areas are found on the eastern slope of the Cascade Range and in certain portions of Lake County, and that such timbered areas contain in the aggregate many billion feet of timber. They aver that "the southern half of eastern Oregon" as described in Article IV comprises many millions of acres in extent and contains within its limits the route of said cross-State line and the territory that would be served by it and that would be tributary to said line; that said southern half of eastern Oregon is not in its entirety or largely or at all a desert country or a "great high desert" or a "great sandy desert"; that within accessible depths below the surface of said southern half of eastern Oregon there are subterranean sources of good, potable water in ample and substantial quantity and that through the drilling of wells and through pumping such subterranean water could be made available for domestic con-
137a sumption, for livestock, and for surface irrigation of the land and that such subterranean waters would be sufficient for such purposes and that it would be practicable so to obtain such water; that said southern half of eastern Oregon is not a "desert area" but that many millions of acres of land therein are well adapted and suitable for settlement, reclamation, and cultivation; that said southern half of eastern Oregon is a rich and productive district but that it is in part semi-arid at certain times of the year; that the annual rainfall therein averages from ten to twelve inches; that in some parts of said southern half of eastern Oregon it is necessary to irrigate the rich, volcanic ash soil to secure good crops; that alfalfa, grain, and all root crops are grown successfully in said southern half of eastern Oregon; that dairying and poultry raising are important industries in said southern half of eastern Oregon and that where dry-farming methods are carried on therein intelligently, fair crops of grain are produced; that the elevation of said southern half of eastern Oregon varies from about 2,500 to 4,750 feet; that said southern half of eastern Oregon is a district of abundant sunshine and where irrigation is not practiced vast stretches of luxuriant sagebrush are found; that stock raising is one of the principal industries of said southern half of eastern Oregon; that there is a large amount of Government land and of State school land in said southern half of eastern Oregon but that on account of the lack of transportation therein by railroads settlers in many districts thereof are few and far between; that a branch experiment station at Burns, Oregon, serves the settlers in said southern half of eastern Oregon in recommending approved varieties of seed grain, methods of dry land tillage, and other farm practices; that in said southern half of eastern Oregon many hardy crops can be grown successfully without serious damage from frost and that the settlement of land

"along the entire route of said proposed railroad and for a distance of fifty miles on either side of it" is and would be feasible and practicable if the said cross-State line were constructed and that the settlement of the land and the growth of population within said area are prevented and made impossible by the lack of rail transportation facilities therein. Whether the southern half of eastern Oregon is known commonly as the "Great High Desert" or is described officially as the "Great Sandy Desert" they state that they are without knowledge and, except as thus admitted, explained, or denied for lack of knowledge, they deny every fact and conclusion alleged in paragraph 8 and particularly that the southern half of eastern Oregon is almost in its entirety or largely
138a or at all a high desert country; that the southern half of eastern Oregon is a great high desert or a great sandy desert or that it is almost entirely or largely or at all without water or that it has no known or practicable available source from which good potable water in substantial quantity can be obtained; that the southern half of eastern Oregon is not adapted or suitable for settlement, reclamation, or cultivation; that the annual rainfall throughout the southern half of eastern Oregon is less than 10 inches; that with respect to a substantial or any part of the southern half of eastern Oregon killing frosts obtain in every month of the year; that along the entire route of said proposed railroad and for a distance of 50 miles on either side of it there is no town or settlement except the town of Burns; and that said town of Burns either alone or with its environs has a population of not more than 200 persons.

5. Answering Article V:

With respect to paragraph 9—

They admit the fact alleged in lines numbered 22 to 31, both inclusive, and in lines numbered 1 to 4, both inclusive, of that part of paragraph 9 of the petition appearing on pages 5 and 6 thereof.

They admit that the Southern Pacific Company now has, controls, and operates in the State of Oregon several branch and feeder lines of railway connecting with its main line in said State, but they aver that said branch and feeder lines are neither so numerous nor so extensive as to penetrate into or serve any part of the territory adjacent (that is, lying with fifty miles to the north and fifty miles to the south thereof and at right angles thereto) to the proposed cross-State line aforesaid. Except as thus admitted or explained they state that they are without knowledge of the facts and conclusions alleged in paragraph 9.

With respect to paragraph 10—

They admit the facts alleged in line 16 to 24 (to the semicolon), both inclusive, of page 6 but in this connection they explain that Portland and its immediate vicinity and Columbia and Clatsop Counties do not lie in any part of the territory tributary to said cross-State line and that no inconsiderable part of the railroad traffic

in western Oregon originates or finds its destination on railroad lines other than those of the Southern Pacific Company. They admit the facts alleged in lines 28 to 32, both inclusive, of page 6 and in lines 1 to 5 (to the semicolon), both inclusive, of page 7.

They admit the facts alleged in lines 8 (from the period) to
139a 29 (to the comma), both inclusive, of page 7, but explain in connection therewith that of the total of said transcontinental traffic for the year 1926 that part only moving through Ogden, Utah, and amounting to 27,218 cars would derive particular benefit from the construction of said cross-State line, if it were routed thereover. They state that they are without knowledge of the facts and conclusions alleged in lines 5 (from the semicolon) to 8 (to the period), both inclusive, of page 7. They state that they are without knowledge of the facts and conclusions alleged in lines 29 (from the comma) to 32, both inclusive, of page 7, and in line 1 of page 8. They state that they are without knowledge of the length of the lines operated in Oregon of the Southern Pacific Company or of the capital invested therein or of the net return on the investment therein that has resulted from the operation of said lines for past years. Except as thus admitted, explained, or denied for lack of knowledge, they deny the facts and conclusions alleged in paragraph 10.

With respect to paragraph 11—

They admit the facts alleged therein but explain in connection therewith that none of the lines of railroad mentioned therein serve any part of the territory that would be adjacent to said cross-State line and they aver that for traffic between (a) many points in western Oregon and (b) Ogden, Utah, and points east of Ogden said cross-State line would constitute an alternate main line with lighter grades and less curvature and distance than would obtain via the Southern Pacific Company's Cascade Line by way of Roseville or Alturas, California, or via any other route.

With respect to paragraph 12—

They admit the facts alleged in lines 2 to 32, both inclusive, thereof on page 9. They aver that a route would be afforded by said cross-State line for transcontinental business between western Oregon and Ogden, Utah, and points east thereof via said "Natron cut-off," Crescent Lake, Oregon, Crane, Oregon, Ontario, Oregon, and Pocatello, Idaho, and that said route would be much more direct, efficient, and economical for the handling of said transcontinental western Oregon business than the route afforded by the Southern Pacific Company via Klamath Falls, Alturas, and Wendel. Except as thus explained they deny the facts and conclusions alleged in lines 1 to 7, both inclusive, of paragraph 12 on page 10.

104a With respect to paragraph 13—

They state that they are without knowledge of the facts and conclusions alleged in lines 8 to 25 (to the comma), both inclusive, and they deny the facts and conclusions alleged in lines 25 (from the comma) to 32, both inclusive, of page 10.

6. Answer Article VI:

They state that they are without knowledge of the facts and conclusions alleged therein except that there is and for some time has been a substantial movement by water of traffic of various kinds to and from Portland, Oregon, and that lumber and other forest products are now transported and in the past have been transported by water in substantial volume from Coos Bay, Oregon.

7. Answering Article VII:

They admit the facts alleged in paragraph 15 but explain in that connection that the line of the Great Northern Railway Company from Bend to Chemult intersects the route of said cross-State line at a point about 18 miles northerly from Chemult and about 21 miles easterly from Crescent Lake.

They admit the facts alleged in paragraph 16.

They admit the facts alleged in paragraph 17.

They admit the facts alleged in paragraph 18 but explain in connection therewith that said Oregon Trunk Railway serves no part of the territory adjacent to said cross-State line.

They admit the facts alleged in paragraph 19.

They admit the facts alleged in paragraph 20 but explain in connection therewith that the lines of said Oregon Electric Railway lie wholly west of the Cascade Mountains and do not extend into any part of the territory that would be adjacent to said cross-State line.

With respect to paragraph 21—

They aver that some of said "the northern lines" have physical connections with some of the others and that they all carry on interstate commerce and that they all are subject to the interstate commerce act and that they are parties to certain through routes and joint rates, fares, and charges, and except as herein explained they state that they are without knowledge of the facts and conclusions alleged in paragraph 21.

141a 8. Answering Article VIII:

With respect to paragraph 22—

They state that they are without knowledge of the cost to the Oregon Trunk Railway of its railroad to Bend or of its investment therein or of the cost to the Des Chutes Railroad Company of its railroad line in the Deschutes River Canyon or of its investment therein, but they admit each and every other fact alleged therein.

With respect to paragraph 23—

They aver that said Oregon Trunk Railway and said Des Chutes Railroad Company serve parts of the counties of Deschutes, Jefferson, Wasco, and Sherman in the State of Oregon. They deny that said two lines of railway serve or that either of them serves any part of Wheeler County, Oregon, or any considerable part of Crook County, Oregon. They state that they are without knowledge of the facts and conclusions alleged in lines 17 (from the semicolon) to 18 (to the semicolon), both inclusive, of paragraph 23. They admit the facts alleged in lines 19 to 22, both inclusive, of paragraph 23. They state

that they are without knowledge whether said lines have been operated for eighteen years last past and whether said operations have been or are consistently attended with operating deficits each year or afford no return to the owners of said lines upon their investment therein, but in this connection they explain that said Des Chutes Railroad Company's line of railroad is a branch line of the petitioner herein and is a valuable feeder with the traffic originated thereon to the petitioner and to its connections, the Oregon Short Line Railroad Company and the Union Pacific Railroad Company in the Union Pacific's system of railroads, and that said Oregon Trunk Railway's line of railroad is a branch line of the Spokane, Portland & Seattle Railway Company and is a valuable feeder with the traffic originated thereon to the Spokane, Portland & Seattle Railway Company and to its connections and parent lines, the Great Northern Railway Company and the Northern Pacific Railway Company, and that the worth and value of said Des Chutes Railroad Company and of said Oregon Trunk Railway can not be judged or estimated fairly from the results of their operations as wholly separate and purely independent properties apart from their affiliations with their connections and parent lines. They admit the facts alleged in lines 25 (from the semicolon) to 28, both inclusive, of paragraph 23.

142a 9. Answering Article IX:

With respect to paragraph 24—

They admit the facts alleged therein but aver by way of explanation that the railroad extensions described therein have long been projected and that more than four years ago the Interstate Commerce Commission authorized the Oregon, California and Eastern Railway Company to construct said extensions but that said Oregon, California and Eastern Railway Company has failed and neglected to proceed with the construction of the extensions so projected and authorized and that neither the projected nor the constructed lines of said Oregon, California and Eastern Railway Company serve, or would serve, any part of the territory adjacent to said cross-State line but that its existing line and the projected lines when constructed will constitute important feeders for the said cross-State line, after it shall have been built, and they state that they are without knowledge whether the authorization granted for the construction of said extensions is valid, subsisting, and outstanding or has lapsed or has been withdrawn.

With respect to paragraph 25—

They state that they are without knowledge of the facts and conclusions alleged therein.

With respect to paragraph 26—

The admit the facts alleged therein.

10. Answering Article X:

They admit the facts alleged in paragraph 27 and in paragraph 28 except that they state that they are without knowledge at what ex-

pense the railroads comprising said Union Pacific system have been constructed, developed, and built up to their present standards.

With respect to paragraph 29—

They admit the facts alleged in lines 30 and 31 thereof on page 15. They admit that the Union Pacific Railroad Company has not owned during any of the times mentioned in the petition and that it does not now own any railroad within the State of Oregon, but in this connection they aver and explain that the Union Pacific Railroad Company owns and controls and at all times herein mentioned has owned and controlled the Oregon Short Line Railroad Company and

143a that said Oregon Short Line Railroad Company now owns and controls and at all times herein mentioned has owned and controlled the Oregon-Washington Railroad & Navigation Company or its predecessor, Oregon Railroad & Navigation Company, and that said Oregon Short Line Railroad Company and said Oregon-Washington Railroad and Navigation Company or its predecessor, Oregon Railroad & Navigation Company, during all the times herein mentioned have owned and/or operated various lines of railroad within the State of Oregon and that said lines of railroad within the State of Oregon as now owned and/or operated by said Oregon Short Line Railroad Company and by said Oregon-Washington Railroad & Navigation Company aggregate in length 2,365 miles, more or less. They admit the facts alleged in lines 1 (from the semicolon) to 10 (to the semicolon), both inclusive, of paragraph 29 on page 16. They state that they are without knowledge whether the railroad mileage of the petitioner as owned and operated by it represents a cost to the petitioner and an investment therein by it of $173,000,000 or of any amount in excess thereof. They state that they are without knowledge of the facts and conclusions alleged in lines 13 (from the semicolon) to 20 (to the semicolon), both inclusive, of paragraph 29 on page 16, but by way of explanation they aver that the losses, if any, resulting during the past ten years from the petitioner's operations have not been and are not due to its loss of the bulk or of any part of the western Oregon business as alleged in paragraph 4 of the petition but are and have been due in part to the apathy and failure and lethargy and neglect of the petitioner actively and persistently and perseveringly to solicit the movement of western Oregon traffic via its Portland gateway, and in part to the failure and neglect of the petitioner to complete the construction of said cross-State line in accordance with the provisions of its original articles of incorporation as aforesaid and to put the same into operation and actively to solicit business from and to points in western Oregon for movement over the cross-State line, and that the construction of said cross-State line and the active solicitation by the petitioner of western Oregon business for movement thereover would enable the petitioner largely to increase the volume of its western Oregon business and greatly to augment its revenues and to earn a fair return upon the aggregate value of its railroad property held

for and used in the service of transportation. They state that they are without knowledge of the facts and conclusions alleged in lines 20 (from the semicolon) to 23 (to the semicolon), both inclusive, of paragraph 29 on page 16. They admit that the petitioner's principal interchange of east and west bound traffic is made with
144a the Oregon Short Line Railroad Company at Huntington, Oregon, and they aver that the movement of petitioner's eastbound and westbound traffic through Huntington, Oregon, has preponderated for a number of years and now preponderates to a substantial extent eastbound and except as thus explained they deny that the movement of said traffic has for years preponderated and does now preponderate heavily eastbound.

With respect to paragraph 30—

They admit the facts alleged in lines 27 to 32, both inclusive, on page 16, and in line 1 (through the word "existing"), on page 17, and they deny that the route and service afforded by said Union Pacific system lines between points in eastern and southeastern Oregon and southern and southwestern Idaho on the one hand and Los Angeles and tributary territory via Salt Lake are shorter in distance or in any respect more efficient than will be the route between said points via said "cross-State line," when the same shall have been constructed.

11. Answering Article XI:

They admit the facts alleged in lines 6 to 15 (to the period), both inclusive, on page 17. They state that they are without knowledge of the facts and conclusions alleged in lines 17 (from the period) to 22 (to the period), both inclusive, on page 17. They admit the facts alleged in lines 22 (from the period) to 25 (to the semicolon), both inclusive, on page 17. They deny that by reason of the control of the Central Pacific Railway Company by the Southern Pacific Company or otherwise access by petitioner via said Oregon eastern route to western Oregon traffic and to its terminal at Portland was cut off and that no substantial traffic was left or available for the remaining part of said route from Odell to Vale, and they aver by way of explanation in this connection that the petitioner now has and long has had access to western Oregon traffic by means of a through route via Portland and of joint rates with the Southern Pacific Company, and that with the construction of said cross-State line, which will complete the unfinished portion of said Oregon eastern route, the petitioner will have further access to western Oregon traffic by means of a through route via Crescent Lake and of joint rates with the Southern Pacific Company, and that at no time has petitioner's access to its terminal at Portland been cut off and that with the construction of said cross-State line there will be traffic (both local and through) in substantial volume that will be routed thereover. They state
145a that they are without knowledge of the facts alleged in lines 29 to 32, both inclusive, on page 17 and of lines 1 and 2 (to the period) on page 18, but in this connection, and by way of explana-

tion they aver that the petitioner's line of railroad from Ontario, Oregon, to Crane, Oregon, is the completed part of the main line of railroad projected by Oregon Eastern Railway Company about the year 1905 to extend westerly from Ontario, Oregon, to Natron, near Eugene, Oregon, and that the original articles of incorporation of the petitioner herein were dated November 23, 1910, and that section first of Article III thereof declared the enterprise, business, pursuit, or occupation of the petitioner to be "to purchase, acquire, own, hold, construct, complete, equip, maintain, and operate the railroads, railroad property, and telegraph lines hereinafter mentioned with their appurtenances and to carry freight and passengers thereon and to receive tolls for such carriage and in all things and in every lawful manner to exercise the powers, privileges, franchises, and functions of a railroad company and of a common carrier in respect to each and all of such lines, to wit:

"18. That part of the railroad and telegraph lines projected and proposed to be constructed by Oregon Eastern Railway Company consisting of (a) a line from Vale across the State of Oregon to a point at or near Odell in said State; (b) a line from a point in Christmas Valley, in the State of Oregon, on said line from Vale to Odell, thence through Silver Lake Valley and through Chewaucan Valley and Goose Lake Valley to a point on the boundary line between California and Oregon in township forty-eight (48) north, range 14 east of Mt. Diablo meridian; (c) a line from Bend, in said State of Oregon, to Odell in said State"; and that the petitioner herein on November 8, 1923, by a resolution duly adopted by its board of directors provided for the extension of its line from Crane to Burns and authorized the construction, maintenance, and operation of such extension and therein adopted the said extension as a branch of its existing line of railway and that the petitioner herein on July 11, 1928, and more than one year after the complaint in said docket No. 19680 was filed with the Interstate Commerce Commission filed supplementary articles of incorporation and thereby amended paragraph 18 aforesaid of section first of Article III of the original articles of incorporation to read as follows:

"18. The line of railroad and telegraph extending from Vale in Malheur County to Burns in Harney County, both in the State
146a of Oregon"; and that Burns, Oregon, is not and never was the designated and intended terminus of said projected main line of railroad, and that said cross-State line was and is the uncompleted portion of said projected main line of railroad. They state that they are without knowledge of the facts and conclusions alleged in lines 2 (from the period) to 8, both inclusive, on page 18.

12. Answering Article XII:

They admit that a line of railroad has been constructed from Burns to Seneca, Oregon, and except as thus admitted they state that they are without knowledge of the facts and conclusions alleged therein but in this connection and by way of explanation they aver

that said Oregon and Northwestern Railroad serves no part of the territory adjacent to said cross-State line.

13. Answering Article XIII:

They admit that a line of railroad has been constructed from Rogerson, Idaho, to Wells, Nevada, and is being operated by said Oregon Short Line Railroad Company and that said Rogerson-Wells line connects with the railroads of the Southern Pacific Company and of the Western Pacific Railroad Company at Wells, Nevada. They deny that the route between points in southern Idaho, and southeastern Oregon on the one hand and San Francisco Bay points and tributary territory on the other via said Rogerson-Wells line is a more efficient route than will or can be afforded by said cross-State line and that the same is not unreasonably long as compared with the route that would be afforded by the construction and operation of said cross-State line and that much or any heavier traffic is immediately tributary to said Rogerson-Wells line than will be tributary to said cross-State line in Oregon. They aver that said line from Rogerson to Wells is an extension in a southerly direction from a line of the Oregon Short Line Railroad Company traversing and serving extensive and productive areas of irrigated land in the Twin Falls, Minidoka, Burley, and Hillsdale districts in south central Idaho and was constructed for the express purpose of serving the Twin Falls, Minidoka, Burley, and Hillsdale districts of south central Idaho and to enable the producers of said districts to market their products in the San Francisco Bay district in California by a shorter route than theretofore existed via McCammon, Idaho, and Ogden, Utah. They further aver that said line from Rogerson and Wells was not constructed for the purpose of serving the producing areas of southwestern Idaho and/or of southeastern Oregon and that said districts have received
147a and can receive substantially no benefit from said line. They further aver that the distances from southwestern Idaho and southeastern Oregon to San Francisco Bay points via said Rogerson-Wells line are unduly and unreasonably circuitous in comparison with the distances between the same points via said cross-State line. They further aver that by reason of infrequent trains, of numerous transfers of cars from one local train to another at the several junction points, and of generally inferior service afforded thereover said Rogerson-Wells line is of no considerable value to the area which it was designed to serve and is entirely uselesss for the handling of traffic from southwestern Idaho and/or southeastern Oregon to San Francisco Bay points or elsewhere. Except as thus admitted or denied they state that they are without knowledge of the facts and conclusions alleged in Article XIII.

14. Answering Article XIV:

They aver that the map mentioned therein depicts incompletely and incorrectly the topographical features of the territorial areas purported to be shown thereon and exaggerates grossly and magni-

fies out of all proportion the mountainous or semi-mountainous parts of the State of Oregon in comparison with similar parts of the States of Washington, California, Nevada, Utah, Idaho, Montana, and Wyoming, and as thus explained they admit the facts alleged therein.

15. Answering Article XV:

Except as may have been admitted specifically hereinbefore they deny the facts and conclusions alleged in lines 31 and 32 of paragraph 35 on page 19 and in lines 1 to 12 (to the period), both inclusive, of paragraph 35 on page 20, but in this connection and by way of explanation they aver that many shippers in western Oregon and in southeastern Oregon and southwestern Idaho would divert, route, and receive large quantities of freight via the said cross-State line, if the same were built and operated. They deny that the evidence adduced upon the hearing of said docket No. 19680 and contained in the record thereof before the Interstate Commerce Commission established or demonstrates without dispute or otherwise the facts (or any of them) alleged in paragraphs (a) to (n), both inclusive, on pages 20 to 25, both inclusive, of the petition except as may be admitted or explained specifically hereinafter. They aver with respect to said paragraph (a) that the Southern Pacific Company lawfully can be required to interchange the traffic originated by it
148a in western Oregon with the petitioner at Crescent Lake without financial detriment to it or to the petitioner or to the latter's connections and that such interchange at Crescent Lake is only one of many reasons and considerations calling for the construction and operation of said cross-State line and justifying the same, and that the petitioner, the Southern Pacific Company, the Great Northern Railway Company and the other common carriers by railroad mentioned in the petition are required by law to manage and to operate their properties honestly, efficiently, and economically, and that with respect to traffic between western Oregon and Ogden, Utah (including points east of Ogden), the petitioner and the Southern Pacific Company could both operate over said cross-State line much more honestly, efficiently, and economically than via any existing route and that the Southern Pacific Company and the Great Northern Railway Company would disregard and violate their legal obligations to operate honestly, efficiently, and economically, if they declined voluntarily to interchange business at Crescent Lake with said cross-State line, after it had been built, and lawfully could be required to make such interchange and that the petitioner and its affiliated Union Pacific system lines serve for the most part territory not reached by the lines of the Great Northern Railway Company and that said last-named company would have no motive for refusing voluntarily to deliver to said cross-State line its business from Klamath Falls and Bend destined to points on the Union Pacific system's lines not competitive with the Great Northern Railway Company, and except as in this statement explained they deny the facts and conclusions alleged in said paragraph (a).

With respect to paragraph (b) on pages 20 and 21—

They aver that the construction of said cross-State line is sought and is required to meet the demands of public convenience and necessity for the following reasons, namely:

(1) To facilitate and to make possible the development of a vast area of the territory of the State of Oregon.

(2) To exploit and to utilize the available natural resources of such undeveloped area and its extensive possibilities for producing traffic for a railroad across the State of Oregon.

(3) To provide for much of the freight and passenger traffic
149a (both interstate and intrastate) handled from and to points in Oregon direct routes in lieu of the existing unduly and unreasonable circuitous routes.

(4) To save much money and time that now are lost to the shipping and traveling public through being compelled to use those circuitous routes and to pay rates and fares based on the distances thereover.

(5) To provide the opportunity for effecting largely increased economy and efficiency in handling the lumber of the Willamette Valley moving to eastern destinations.

(6) To eliminate the excessive and unreasonable delay to which the products of the State of Oregon and of the ten southwestern counties of Idaho are now subjected in considerable part in reaching the principal seaports and consuming markets of Oregon and California.

(7) To mitigate the severity of car shortages in Oregon that have recurred periodically in the past and the losses therefrom that have been suffered by shippers.

(8) To accord to interior Oregon the benefits of reasonable competition between railroads in the matter of the service and facilities of transportation due to be accorded by them and to afford interior Oregon adequate outlets for its products to markets in California and in western Oregon.

Except as thus explained they deny the facts and conclusions alleged in said paragraph (b).

With respect to paragraph (c) on page 21—

They deny the facts and conclusions alleged therein except that they admit that one of the purposes of the complainant in said docket No. 19680 was and is to obtain competitive railroad service in western Oregon. They further aver by way of explanation that through interchange of traffic with the Southern Pacific Company and with the Great Northern Railway Company at Crescent Lake, or in the vicinity thereof, the petitioner will receive sufficient traffic for said cross-State line to make unnecessary any further construction by it over and across the Cascade Mountains and into and through the areas of western Oregon and over and across the Coast Range of mountains to the Pacific coast but that should said petitioner desire to construct such further extensions for the purpose of

increasing its traffic and revenues, there are available for its use three or more practicable and economical routes into and through virgin and unserved areas rich in natural resources to western Oregon and to the Pacific coast.

150a With respect to paragraph (d) on page 21—

They aver that when said cross-State line shall have been built and put into operation local traffic produced by the territory traversed by it and accessible thereto and through traffic ("through" meaning not originating between the termini) will move thereover in volume sufficient to contribute substantially to its support and amply to justify its construction, and except as thus explained they state that they are without knowledge of the facts and conclusions alleged in paragraph (d) on page 21.

With respect to paragraph (e) on pages 21 and 22—

They admit that a few products of the ten southwestern counties in Idaho and of Malheur County, Oregon (where irrigation is commonly practiced), are similar in character to those raised and produced in western Oregon (where irrigation is not practiced commonly), but in this connection they aver by way of explanation that many other products thereof are diverse in character from those of western Oregon and that by reason of substantial differences in soil, topography, elevation, rainfall, temperature, and climate generally between western Oregon on the one hand and the ten southwestern counties of Idaho and Malheur County, Oregon, on the other, there is no universal or general or comprehensive similarity of the products of the two respective areas nor will there be in the future nor do such of the products of the two respective areas as are of like kind mature at the same season of the year and therefore are not competitive with each other in the markets in California or elsewhere. They deny that the products of the ten southwestern counties in Idaho and of Malheur County, Oregon, are or will continue to be similar in character to those raised and produced in the State of Washington. They deny that the products of the ten southwestern counties in Idaho and of Malheur County, Oregon, to find market in San Francisco Bay communities must compete with the products of western Oregon and Washington. They admit that the distance from some points of origin in western Oregon to San Francisco Bay market is shorter than the distance would be from southwestern Idaho and Malheur County points of origin via said cross-State line, and except as thus admitted they state that they are without knowledge of the facts and conclusions alleged in lines 22 (from the comma) to 28 (to the semicolon), both inclusive, on page 21. They aver that western Oregon readily could sustain a much larger population and that the construction of said cross-State line would

151a stimulate the growth of population in western Oregon and that the actual production of western Oregon is considerably below its capacity to produce and that its present production exceeds local demand or ability to consume and that Portland is a large city

and commercial and industrial center in western Oregon and that it is and will continue to be able along with the rest of western Oregon to consume a substantial volume of the products of southern Idaho and to afford a market therefor, and except as thus explained they state that they are without knowledge of the facts and conclusions alleged in lines 28 (from the semicolon) to 32, both inclusive, of page 21 and of line 1 (to the semicolon) of page 22. They admit that there are producing areas in the southern part of Lake and Klamath Counties in Oregon and in central California and they aver that at the hearing of said docket No. 19680 substantial evidence respecting the consuming capacity of San Francisco Bay markets was offered by these interveners, was received and was not rebutted, and except as thus admitted and explained they state that they are without knowledge of the facts and conclusions alleged in lines 1 (from the semicolon) to 6 (to the semicolon), both inclusive, of page 22. They deny the facts and conclusions alleged in lines 6 (from the semicolon) to 12, both inclusive, of page 22.

With respect to paragraph (f) on page 22 they aver that, if said cross-State line should be constructed, the production of lumber in Oregon, Washington, or Idaho or in the western or Pacific coast country in general would not be stimulated thereby but that the lumber industry in said States would benefit greatly therefrom, and except as thus explained they deny the facts and conclusions alleged in lines 19 (from the comma) to 22 (to the period), both inclusive, on page 22, and they aver that the other facts alleged in said paragraph (f) are too sweeping as applied to the lumber industry generally in the territory described in lines 13 and 14 on page 22, but as thus explained are substantially correct, and that said cross-State line would afford to the manufacturers of lumber in Oregon a substantially shorter and more economical route and a materially expedited service (in comparison with the existing service) for the shipment of their products to markets east of Ontario, Oregon, and thereby would enable them better to compete in selling their products in said markets and that said cross-State line would also provide necessary facilities of transportation for the marketing of timber which by reason of overmaturity, disease, fire hazard, or the financial situation of its owners must be marketed,

if at all, in the immediate future and will be vitally essen-
152a tial to carry the substantially increased volume of lumber

which producers in Oregon will be called upon to supply within the reasonably near future.

They deny the facts and conclusions alleged in paragraph (g) on pages 22 and 23.

With respect to paragraph (h) on page 23—

They aver that the case of the complainant in said docket No. 19680 contemplated a railroad of a quality of construction suitable to serve as an auxiliary main line of the petitioner between Huntington, Oregon, and points in western Oregon and the operation of

such trains and the furnishing of such service thereupon and thereover as will result in the maximum of efficiency and economy in the transportation of traffic local to said cross-State line and of through traffic between points in western Oregon and points east of Ontario, Oregon, and of Ogden, Utah, and except as herein explained they deny the facts and conclusions alleged in lines 2 to 5 (to the semicolon), both inclusive, on page 23. They deny that traffic is or can be transported over the main lines of the petitioner, of the Oregon Short Line Railroad Company, of the Los Angeles and Salt Lake Railroad Company, of the Southern Pacific Company, and of the Central Pacific Railroad Company via Portland and Huntington, via Alturas, via Wells, or via Ogden and Salt Lake with frequency, speed, and efficiency that are very much or at all greater via the said cross-State line in connection with the Ontario-Crane line of the petitioner, but they admit with respect to the allegations contained in lines 5 (from the semicolon) to 13 (to the semicolon), both inclusive, of page 23 that said main lines have been built up at considerable but not unusual expense and are maintained generally speaking at reasonably good standards of quality, efficiency, and safety in respect of roadbed, tracks, structures, facilities, and appurtenances and in this connection they aver by way of explanation that said main lines (with the exception of the Los Angeles and Salt Lake Railroad Company) can be operated with substantially greater efficiency and economy after the said cross-State line shall have been constructed than is possible now or than will be possible until such construction is completed. They state that they are without knowledge of the facts and conclusions alleged in lines 13 (from the semicolon) to 15 (to the semicolon), both inclusive, on page 23, but they aver in this connection by way of explanation that petitioner's line from Ontario to Crane
153a was constructed as an auxiliary main line for handling traffic between western Oregon and points east of Ontario, Oregon, and that if it be not suitable now for main-line business, it can be improved and rehabilitated readily and without undue expense so that it may serve as an auxiliary main line for the petitioner. They state that they are without knowledge of the facts and conclusions alleged in lines 15 (from the semicolon) to 18, both inclusive, of page 23, but they aver in this connection by way of explanation that the illustration given therein is not typical or fairly representative of the utility of said cross-State line but is abnormal and misleading and that it never was and is not now proposed or suggested by these interveners that said cross-State line should be built to provide a new route between Ontario and Portland for traffic to be transported between those two points.

They state that they are without knowledge of the facts and conclusions alleged in paragraph (i) on page 23.

With respect to paragraph (j) on pages 23 and 24 they admit that Boise is located in the southwestern part of Idaho on the main line

of the Oregon Short Line Railroad Company and that the distance therefrom via said cross-State line and the Southern Pacific Company to San Francisco would be 911 miles and via Wells, Nevada, and the Southern Pacific Company is 968 miles and that the distance from Boise to Los Angeles via Oregon Short Line Railroad Company and Los Angeles and Salt Lake Railroad Company is 1,204 miles and via said cross-State line and the Southern Pacific Company would be 1,375 miles and they aver that the service of transportation afforded by the Union Pacific system via Wells, Nevada, and thence over the Southern Pacific Company lines is infrequent, inadequate, unreasonable, and unsatisfactory and that by reason thereof said route is not as a practical matter available for the shipment of products from southwestern Idaho to San Francisco and that substantially no traffic to and from points in southwestern Idaho is routed via Wells, Nevada, and that the shortest available route over which regular and daily service is now afforded from southwestern Idaho to San Francisco bay points is via Ogden, Utah, over which route the distance from Boise to San Francisco is 1,149 miles and that the greater portion of the territory in southwestern Idaho which said cross-State line would serve lies westerly from Boise, Idaho, and that the saving in distance from said points in southwestern Idaho west of Boise via said cross-State
154a line would be substantially greater than the saving in distance from Boise and that construction of said cross-State line is not now sought and has not been sought by these intervening defendants to provide a shorter route from southwestern Idaho to Los Angeles but that said cross-State line would afford a new route to Los Angeles through San Francisco, which new route would give to the producers and shippers of southwestern Idaho and of southeastern Oregon opportunity to try the markets of San Francisco Bay and other northern California points and then to divert their shipments to Los Angeles, if market conditions made such diversion desirable, without any substantial increase in the length of the haul in comparison with the existing routes to Los Angeles, and except as thus admitted or explained they state that they are without knowledge of the facts and conclusions alleged in said paragraph (j).

They state that they are without knowledge of the facts and conclusions alleged in paragraph (k) on page 24, but in this connection they aver by way of explanation that Crescent Lake is a division point on the main line of the Southern Pacific Company running in a general northerly and southerly direction through western Oregon and that weather conditions during the winter at that point do not interfere materially with the efficiency of the Southern Pacific Company's operations and would not interfere with an efficient interchange of traffic there between said cross-State line and the Southern Pacific Company.

With respect to paragraph (l) on page 24—

They admit that certain irrigation projects in Oregon are involved in debt, but by way of explanation they aver that it was established at the hearing in said docket No. 19680 that substantial progress has been made and is being made by the several officers and departments of the State of Oregon in refinancing and rehabilitating such irrigation projects in eastern and central Oregon as have been involved in financial difficulties and that within the near future said projects will have been placed on a sound and economical financial basis and that from the standpoint of engineering and finance said projects are inherently sound and practicable or can be made so, and aside from the financial embarrassment experienced by some of them in recent years said projects are entirely justified and in accordance with good economics. Except as thus admitted they state that they are without knowledge of the facts alleged in paragraph (l).

155a With respect to paragraph (m) on page 24—

They state that they are without knowledge of the facts and conclusions alleged in lines 18 to 25 (to the semicolon), both inclusive, thereof, and they admit the facts alleged in lines 25 (from the semicolon) to 28, both inclusive, thereof, but they aver in this connection and by way of explanation that such facts are without legal significance in this cause and that likewise Baker, Oregon, and Pendleton, Oregon, are nearer to Portland via the petitioner's line than they would be via said cross-State line and the Southern Pacific Company's lines, and that Portland is not a fairly representative point in western Oregon, by reference to which alone the benefits that would accrue to all of western Oregon from the said cross-State line can be measured.

They state that they are without knowledge of the facts and conclusions alleged in paragraph (n) on pages 24 and 25, but in this connection and by way of explanation they aver that said cross-State line will afford a valuable opportunity to shippers of livestock to Pacific coast destinations to divert them en route to Portland, or to Puget Sound points or to San Francisco Bay points, or to Los Angeles without any back-haul or out-of-line haul, and that the markets for livestock at Portland and Puget Sound are limited and are easily broken to the serious disadvantage and loss of producers and shippers in eastern Oregon and southern Idaho of livestock and that San Francisco Bay points and Los Angeles are extensive consumers of livestock and are important markets for livestock and are satisfactory and desirable markets for the livestock produced in eastern Oregon and southern Idaho, but that under existing conditions and transportation routes said markets are not readily accessible to the livestock producers of eastern Oregon and of southern Idaho by reason of long and circuitous hauls over heavy mountain grades with heavy shrinkage in the weight of the animals shipped and consequent large financial loss to said producers and shippers, and that the construction of said cross-State line would afford to said

producers and shippers of livestock a short, direct, economical, and practical route for the carriage of livestock to San Francisco Bay points, which route would afford to said producers and shippers the additional important advantage of enabling them to start their shipments westbound and on or before their arrival at Crescent Lake to divert the same to the market found to be most desirable and profitable and that shipments so diverted toward Portland might later be diverted on to Puget Sound and shipment so diverted
156a south via the Southern Pacific Company's lines, if not sold at a satisfactory price at San Francisco Bay points, might be diverted on to the markets of southern California and that the ability of livestock shippers so to ship and divert their livestock constitutes a great advantage to them and a substantial saving in the marketing thereof and that the shrinkage on shipments to San Francisco Bay points by reason of said shorter and less mountainous route via said cross-State line would be lessened to the extent of approximately $68.00 a car of cattle so shipped.

They deny the facts and conclusions alleged in paragraph 36 of the petition.

16. They deny the facts and conclusions alleged in Article XVI of the petition.

17. They deny the facts and conclusions alleged in Article XVII of the petition.

18. Answering Article XVIII:

They deny the facts and conclusions alleged in paragraph 39 and in this connection and by way of explanation they aver that the order made in said docket No. 19680 by the Interstate Commerce Commission did not require the petitioner to provide the Umpqua or Rogue River Valleys or any other territory located west of the Cascade Mountains with the facilities for transportation by railroad nor to build branch or feeder lines from said cross-State line.

With respect to paragraph 40—

They admit lines 26 to 30 (to the comma), both inclusive, on page 27, and they admit that said cross-State line would proceed in a different direction than does the petitioner's line from Crane to Burns, and except as thus admitted they deny the facts and conclusions alleged in paragraph 40 of the petition, and in this connection and by way of explanation they aver that petitioner's line from Crane to Burns is a branch from the uncompleted auxiliary main line of the petitioner from Vale to a point at or near Odell and that said auxiliary main line and its completion as aforesaid were up to July 11, 1928, a project of the petitioner as set forth in its original articles of incorporation and that the construction of said cross-State line would finish the now uncompleted part of said auxiliary main line of the petitioner and would constitute an extension thereof within the meaning of paragraph 21 of section 1 of the interstate commerce act and that said auxiliary main line would have remained to this day a project of the petitioner set forth as

aforesaid in its articles of incorporation except for the filing and prosecution of the complaint in said docket No. 19680, as a
157a result of which the petitioner's articles of incorporation were amended as alleged in paragraph 1 of this answer.

They aver that paragraph 21 of section 1 of the interstate commerce act was enacted as a part of section 402 of the transportation act, 1920 (41 Statutes at Large, 476, 477, 478), and that besides providing therein for the compulsory extension of the line or lines of a railroad said section 402 provided, and still provides, that a railroad desiring to extend its line or lines or to abandon all or any part of a line must first obtain from the Interstate Commerce Commission a certificate that the present or future public convenience and necessity require the construction and operation or the abandonment (as the case may be) of such extension or line, and said section 402 also contained, and still contains, numerous provisions relating to car service, joint use of terminals, and other matters, and that the authority and power of the Interstate Commerce Commission by virtue of said paragraph 21 of section 1 of the interstate commerce act include compelled extensions of the line or lines of a railroad, whether in the immediate territory entered or occupied by its railroad and local to its existing line and railroad enterprise or outside of such territory and beyond it, and except as herein explained they deny the facts and conclusions alleged in paragraph 41 of the petition.

19. Answering Article XIX:

They aver that J. P. Newell is, and for many years last past has been, a civil engineer of national and international standing and reputation and that the Public Service Commission of Oregon employed him to prepare a transportation cost study covering the route of said cross-State line to and from western Oregon in comparison with the then existing route via Roseville, California, and with the then contemplated route (since completed) via Alturas, California, and that he prepared in minute detail a voluminous document or treatise embracing the results of such study, and that the same was introduced in evidence at the hearing in said docket No. 19680 in connection with oral testimony given by said Newell and along with divers other exhibits in writing prepared by him, and that besides said Newell the complainant in said docket No. 19680 called numerous other witnesses and that much testimony given and many exhibits prepared by such other witnesses were offered and received in evidence at the hearing in said docket No. 19680 in support of the complaint therein, and except as thus admitted or explained they deny the facts and conclusions alleged in lines
158a 31 and 32 (on page 28) of paragraph 42 and in lines 1 to 11 (to the period), both inclusive, on page 29 thereof. They aver that it was established at the hearing in said docket No. 19680 that after the construction of said cross-State line a large part of the traffic between points served by the Southern Pacific Company and its connections in western Oregon and points east of Ogden, Utah,

could be interchanged at Crescent Lake for transportation over said cross-State line and said Union Pacific system's lines much more efficiently and economically and at a greater net earning to all of the participating carriers than via any other route and that most of the present traffic between points in the 10 counties in southwestern Idaho and San Francisco, California, and points adjacent thereto could be moved via the said cross-State line after its construction much more efficiently and economically and at a greater net earning to all of the participating carriers than by any existing route, and except as thus explained they deny the facts and conclusions alleged in lines 11 (from the period) to 19 (to the period), both inclusive, on page 29 of said paragraph 42. They admit the facts alleged in lines 19 (from the period) to 32, both inclusive, on page 29, and of lines 1 to 32, both inclusive, on page 30, and in lines 1 to 16, both inclusive, of page 31, but they aver in this connection and by way of explanation that the quoted portions of said Newell's testimony (considered alone and apart from the rest of his testimony and from his exhibits and from all the other evidence in the record in said docket No. 19680) give a grossly incomplete and misleading picture and impression of the showing made by the complainant therein and that the findings and order of the Interstate Commerce Commission in said docket No. 19680 were not based solely or substantially upon the quoted parts of said Newell's testimony, and that said quoted testimony was given by said Newell during the early part of the hearing in said docket No. 19680 and before said Newell was informed concerning the estimated tonnage over said cross-State line between points in southwestern Idaho and northern California and before said Newell was informed concerning the voluntary routing via said cross-State line of traffic by shippers in western Oregon, and that after having given the quoted testimony aforesaid, and after being informed concerning said traffic, said Newell prepared and introduced in evidence a study and exhibit marked "Complainant's Exhibit No. 107, Witness Newell," which exhibit, along with other things, contained the following statement: "Diversion of the entire traffic of western Oregon to the cross-State line is not required
159a in order to provide the new route with sufficient traffic to justify it. If there be no compulsory interchange between the carriers at Crescent Lake, a considerable part of the traffic which I have claimed for the new line would be subject to competition between the carriers. * * * Any arrangement whereby the cross-State line can be assured of one-half of the traffic which might otherwise be carried via Alturas or Roseville will, in my opinion, justify an order by the Interstate Commerce Commission for its building."

With respect to paragraph 43—

They aver by way of explanation that at the hearing in said docket No. 19680 elaborate and detailed estimates of both transcontinental and local traffic over said cross-State line were made by witnesses

Teutsch, Wiggins, and others and that the results of these estimates were used by said Newell in his testimony and exhibits and that said estimates were not based upon speculation but upon the volume of movement of existing traffic between western Oregon and points east of Ogden, Utah, and upon the volume of production and consumption (past, present, and prospective) in areas of territory that would be tributary to said cross-State line or that could be reached most efficiently and economically and by the shortest route via the same and were conservative and not inflated and that they believe that the figures in carloads of such traffic and in dollars and in percentage (15.5 per cent) of the earnings therefrom are set out correctly in said paragraph 43.

They further aver that through development of agricultural and industrial pursuits naturally incident to the growth of the State of Oregon upon the completion of said cross-State line a volume of traffic substantially equal to or greater than that now originating in the counties of western Oregon should and would move over said cross-State line and that said traffic would not consist principally of tonnage diverted from the lines of the Southern Pacific Company, but, on the contrary, would constitute principally traffic created by reason of the construction of said cross-State line as the result of its competitive influence and of its substantially shorter and more economical route to important markets for western Oregon products. Except as thus explained or admitted they state that they are without knowledge of the facts and conclusions alleged in said paragraph 43.

With respect to paragraph 44—

They deny the facts and conclusions alleged, and by way of
160a explanation they aver that it was established upon the hearing of said docket No. 19680 that the petitioner has joined with the Oregon Trunk Railway in the ownership and/or operation of a line or of lines of railroad along the Deschutes River between Bend and Sherman, Oregon, and that it is feasible and practicable for the petitioner to extend such joint ownership and/or operation to the tracks of the Great Northern Railway Company from Bend to Chemult, Oregon, or to its junction with said cross-State line, or as an atlernative to acquire trackage rights by which lumber and other traffic originating at Bend may be transported by it to and over said cross-State line and that the proposed route to and over said cross-State line would be shorter, more practicable, more efficient and more economical for the handling of traffic originating at Bend, or in that vicinity, and destined to points on the Union Pacific system east of Huntington, Oregon, than by petitioner's existing route and that by so routing said traffic the petitioner would avoid the difficult and expensive operating conditions over the Blue Mountain grades and that substantial savings would result to petitioner thereby and that by reason of said economy it would be to the interest of the petitioner so to route a substantial part of its tonnage originating on its said railroad at Bend and in that vicinity.

With respect to paragraph 45—

They admit the facts alleged in lines 24 to 32, both inclusive, on page 32, but in this connection and by way of explanation they aver that said quoted provision of the interstate commerce act is intended to prevent the short-hauling of an originating carrier to its financial detriment and that a compulsory interchange at Crescent Lake between said cross-State line and the Southern Pacific Company would not short-haul any of the Union Pacific system lines and would short-haul the Southern Pacific Company but only to its financial and pecuniary benefit and advantage in comparison with its net earnings for interchange as at present at Ogden, Utah, and they admit the allegations contained in lines 1 to 5 (to the second comma) both inclusive, on page 33, and they state they are without knowledge of the facts and conclusions alleged in lines 5 (from the second comma) to 8, both inclusive, on page 33, but by way of explanation they aver that honest, efficient, and economical management would require the routing over said cross-State line of a substantial part of the tonnage originating in western Oregon when destined to points on the lines of the Union Pacific system and its connections east of Ogden, Utah, and that substantially increased net
161a revenues to the Southern Pacific Company and to the Union Pacific system lines would result from routing said traffic via said cross-State line and would cause the Southern Pacific Company, the Great Northern Railway Company, the Oregon Short Line Railroad Company, and the petitioner voluntarily so to route said tonnage. They further aver that by reason of shortened distances and improved service thereover the shippers of western Oregon would route voluntarily a substantial portion of said traffic over said cross-State line and that the financial interests of the petitioner would prompt and impel it to solicit traffic actively and persistently in western Oregon for routing over said cross-State line.

With respect to paragraph 46—

They state that they are without knowledge of the facts and conclusions alleged in lines 9 to 12 (to the comma), both inclusive, of page 33, and they deny the facts and conclusions alleged in lines 12 (from the comma) to 17, both inclusive, of page 33.

20. Answering Article XX:

They admit the facts alleged in line 20 to 22 (to the comma), both inclusive, on page 33, and they aver by way of explanation that it was established at the hearing that the petitioner after the construction of said cross-State line could route its traffic from Bend, Oregon, to points east of Ontario, Oregon, more efficiently and more economically via said Bend-Chemult line and via said cross-State line than via the existing route through Sherman, Oregon, and Huntington, Oregon, and except as thus explained they state that they are without knowledge of the facts and conclusions alleged in lines 22 (from the comma) to 27, both inclusive, on page 33.

21. Answering Article XXI:

With respect to paragraph 48—

They aver that witness Newell in his testimony and exhibits in said docket No. 19680 included no portion of western Oregon traffic that can move more economically eastbound via the Portland gateway and petitioner's line than would be possible via said cross-State line, and except as thus explained they state that they are without knowledge of the facts and conclusions alleged in line 32 on page 33 and in lines 1 to 5 (to the period), both inclusive, on page 34. They admit the facts alleged in lines 5 (from the period) to 7, both inclusive, on page 34. They aver that the allegations
162a contained in lines 8 to 15 (to the period) on page 34 are inadequate to portray or to reflect the substance of the testimony and evidence given at the hearing in said docket No. 19680 by the witnesses for the complainant therein in support of their estimates of the tonnage that would be produced and move over said cross-State line, and for greater certainty they refer to such testimony and evidence in their entirety, the contents of which the petitioner well knows. They aver that the construction of said cross-State line will result in the reclamation of large areas of lands now semiarid and that a reasonably adequate supply of water for the growing of crops and for the sustaining of livestock can then be obtained and applied thereon, and that said lands can then be settled and homes can then be established thereon, and that crops and livestock can then be produced successfully thereon and that adequate consuming markets justifying the transportation of such products now exist and will exist in the future, and that the rehabilitation, refinancing, and settlement of reclamation projects in central and eastern Oregon on a successful basis can be effected, and except as thus explained they deny the facts and conclusions alleged in lines 8 to 15 (to the period) on page 34. They state that they are without knowledge of the facts and conclusions alleged in lines 15 (from the period) to 17 (to the semicolon), both inclusive, on page 34, except that they aver in this connection that the Oregon Short Line Railroad Company serves far more territory in the State of Idaho than any other railroad. They admit the facts alleged in lines 17 (from the semicolon) to 27 (to the period), except that they aver by way of explanation that tonnage from all of said 17 different counties in Oregon would be accessible to said cross-State line either through lines of railroad of the petitioner or of the connections by railroad of the petitioner and that all of said 17 counties are or could be served by the petitioner through its own local rates or through joint rates made by it with its connections. With respect to the facts and conclusions alleged in lines 27 (from the period) to 32, both inclusive, on page 34, and in lines 1 to 9 (to the period), both inclusive, on page 35, they aver that the movement of a very large part of the traffic of all 17 of said counties (including Malheur, Harney, and Lake) over said cross-State line would be in accordance with natural laws, with the

interstate commerce act, and with long standing and accepted practices of railroads generally in conducting transportation, and except as thus explained they deny said facts and conclusions. They aver that the Southern Pacific Company and the Great
163a Northern Railway Company operate lines of railroad in Klamath County, and that after the construction of said cross-State line a substantial volume of traffic from Klamath County could be routed thereover more efficiently and economically than via any other route, and except as thus explained they deny the facts and conclusions alleged in lines 9 (from the period) to 13, both inclusive, of page 35. They aver that Deschutes County is the source of a heavy volume of traffic for the existing railroads paralleling the Deschutes River and that said cross-State line would traverse the northern parts of Lake and Klamath Counties and that Deschutes County lies immediately north of Klamath and Lake Counties and that a substantial volume of traffic from Deschutes County would be available for said cross-State line and could and would move thereto and thereover, and that Crook County lies within a few miles of the northern boundary line of Lake County and that Jefferson and Wheeler Counties lie from fifty to sixty miles north of said cross-State line, and except as thus explained they state that they are without knowledge of the facts and conclusions alleged in lines 14 to 16, both inclusive, of page 35. They deny that the Blue Mountain Range intervenes between said cross-State line and Wheeler County, and they aver that traffic in appreciable volume from Wheeler County would be available for said cross-State line and could and would move thereto and thereover, and except as thus denied and explained they state that they are without knowledge of the facts and conclusions alleged in lines 17 to 21 (to the period), both inclusive, of page 35. They aver that traffic in appreciable volume from Baker County would be available for said cross-State line and could and would move thereto and thereover, and they admit that Baker County is traversed by the petitioner's main line of railroad and that a branch line of petitioner extends for some miles along the eastern boundary of Baker County, and that a part of the line of the Sumpter Valley Railroad Company lies in Baker County, and except as thus admitted or explained, they state that they are without knowledge of the facts and conclusions alleged in lines 21 (from the period) to 27 (to the period), both inclusive, on page 35. They aver that traffic in appreciable volume from Grant County would be available for said cross-State line and that for twelve or fifteen miles the line of Oregon and Northwestern Railway Company serves a very small part of Grant County, and except as thus explained they admit the facts alleged in lines 27 (from the period) to 29 (to the period), both inclusive, of page 35. They
164a aver that the main line of railroad of the Southern Pacific Company between Eugene, Oregon, and Klamath Falls, Oregon, crosses the Cascade Range of Mountains and thus provides access

by railroad from western Oregon to said cross-State line, and that the Coast Range of Mountains in western Oregon is crossed by three branch lines of the Southern Pacific Company, and that the distance from Crescent Lake, the proposed western terminus of said cross-State line, to Powers in the southern part of Coos County, near the boundary line of Curry County, is more than two hundred and fifty miles, but that said route is extremely circuitous and that a very much shorter route via Chiloquin, Oregon, in Klamath County, Butte Falls, and Medford in Jackson County, and Grants Pass and Waters Creek in Josephine County is feasible and is partly completed and in operation and eventually will be completed. As thus explained, they admit the facts alleged in lines 29 (from the period) to 32, both inclusive, on sheet 35, and in lines 1 to 3, both inclusive, on page 36.

They aver that the complainant in said docket No. 19680 at the hearing therein called as one of its witnesses H. F. Wiggins and that said Wiggins then was and had been for years an expert in matters relating to rates, traffic, and transportation and that said Wiggins compiled elaborate and detailed exhibits containing estimates of revenue to be derived by said cross-State line from its traffic, and the same were received in evidence as explained by said Wiggins, and that the data, statistics, and information constituting the basis of said estimates of revenue so computed by said Wiggins were furnished to him by the Southern Pacific Company (such data, statistics, and information not being in dispute or contested upon the hearing in said docket No. 19680), and by the detailed and comprehensive estimates (received in evidence in the form both of exhibits and of oral testimony at the hearing in said docket No. 19680) of production, consumption, and markets made by Witness Teutsch and by other witnesses at said hearing, and except as thus explained they deny the facts and conclusions alleged in lines 4 to 11 (to the period) of page 36. They aver that said Witness Newell in the preparation of some of his exhibits used the data, information, and statistics supplied as aforesaid by said Southern Pacific Company and much other data, information, and statistics relating to the traffic and operations of the petitioner and of the Oregon Short Line Railroad Company and some of the estimates of said Wiggins and of said Teutsch and much other statistical data and mate-

165a rial and that each and every item of traffic included in the estimates of the witnesses on behalf of the complainant in said docket No. 19680 was vouched for, supported and affirmed by the evidence of one or more witnesses familiar with the facts and competent to testify concerning the same, and that said witnesses showed that the volume of traffic estimated by said Newell and by said Wiggins, or a substantially greater volume of traffic, would move over said cross-State line, and that such movement would be practicable and would be required in the interest of public convenience and necessity, and except as thus explained they deny every fact and conclusion contained in lines 11 (from the period) to 29,

both inclusive, of page 36 and they also deny that the petitioner's deductions from said Newell's testimony and exhibits are correct, and they aver that said allegations with respect thereto are wholly inadequate fairly to portray or to reflect the same, and for greater certainty they refer to the testimony and exhibits of said Newell in their entirety, the contents of which the petitioner well knows.

22. Answering Article XXII:

They aver that the case of the complainant in said docket No. 19680 was and is based upon the issues tendered by the complaint therein, of which only one out of eight concerned large economies and savings to be accomplished by the movement of Western Oregon traffic over said cross-State line as compared with its movement over the Southern Pacific Company's route to Ogden either via Roseville or via Alturas, and that at the hearing in said docket No. 19680 said witness Newell undertook to establish by proof, and did so establish, said issue, and that the allegations contained in paragraph 50 of the petition are inadequate to portray or to reflect the testimony and evidence of said Newell in establishing said issue, and for greater certainty they refer to said testimony and evidence in their entirety, the contents of which the petitioner well knows, and except as thus explained they deny the facts and conclusions alleged in said paragraph 50.

23. Answering Article XXIII:

They deny that in or by its report in said docket No. 19680 the Interstate Commerce Commission made findings unsupported by evidence or contrary to the undisputed evidence therein or contrary to facts of common knowledge or of judicial cognizance.

They aver that after the conclusion of the hearing in said docket No. 19680 the Alturas line of the Southern Pacific Company
165a was completed and was put into operation, and that the route between western Oregon and Ogden, Utah, via said Alturas line is 214 miles longer than the route via said cross-State line and that subsequent to the filing of the complaint in said docket No. 19680 the Southern Pacific Company applied for permission to construct its said Alturas line, and after the hearing in said docket No. 19680 actually finished its construction and placed said line in operation, and that at the time of said application for authority to construct its Alturas line the Southern Pacific Company was fully informed that complainant in said docket No. 19680 would seek an order from the Interstate Commerce Commission requiring the construction of said cross-State line for the purpose, along with others, of providing a better route for the shipment of products originating at, and destined to, points in western Oregon and that the complainant in said docket No. 19680 appeared before the Interstate Commerce Commission in the proceedings wherein the Southern Pacific Company sought permission to construct its Alturas line, and in said proceedings again informed the Southern Pacific Company and the Interstate Commerce Commission of its intention to urge

and to demand the construction of said cross-State line and further informed the Southern Pacific Company and the Interstate Commerce Commission that the proposed Alturas line was not a reasonable or satisfactory substitute for said cross-State line, and except as thus explained they admit the facts alleged in paragraph (a) on page 38, and they aver that the quoted allegation is true and was based on substantial evidence.

They aver that the allegation quoted in lines 20 to 22, both inclusive, on page 38 (which they admit the Interstate Commerce Commission's report contains) is true and was based on substantial evidence, and that the movement of traffic in substantial volume from eastern Oregon and from southwestern Idaho to southwestern Oregon points has been prevented in the past by the extremely circuitous route via Huntington and Portland and by the rates in effect thereover and will be so prevented in the future until the said cross-State line shall have been built and put into operation and except as thus admitted or explained they deny the facts and conclusions contained in pargraph (b) on page 38.

They aver that the allegation quoted in lines 29 to 31, both inclusive, of page 38 (which they admit the Interstate Com-
167a merce Commission's report contains) is true and was based on substantial evidence, and except as thus admitted or explained they deny the facts and conclusions alleged in paragraph (c).

They admit that the Interstate Commerce Commission made the finding quoted in paragraph (d) and they aver that the same is true and was based on substantial evidence, and that in relation to the area of the State of Oregon to be served, railroad construction therein has been greatly limited and restricted, and they state that they are without knowledge of the cost of existing railroad construction in Oregon and of the facts and conclusions alleged in lines 7 to 9, both inclusive, on page 39, and they deny that said finding of the Interstate Commerce Commission is an arbitrary finding or conclusion or is contrary to the facts.

They admit that the Interstate Commerce Commission made the finding quoted in paragraph (e), and they aver that the same is true and was based on substantial evidence and that the territory which would be affected by said cross-State line is not served and never has been served by existing railroads, and except as thus admitted or explained they deny the facts and conclusions alleged in said paragraph (e).

They admit that the Interstate Commerce Commission made the finding quoted in paragraph (f), and they aver that the same is true and was based on substantial evidence, and except as so admitted or explained they deny the facts and conclusions alleged in said paragraph (f).

They admit that the Interstate Commerce Commission made the finding quoted in paragraph (g), and they aver that the same is

true and was based on substantial evidence, and except as thus admitted or explained they deny the facts and conclusions alleged in said paragraph (g).

They admit that the Interstate Commerce Commission made the finding quoted in pargraph (h), and they aver that the same is true and was based on substantial evidence, and except as thus admitted or explained they deny that the facts and conclusions alleged in said paragraph (h) are true for any or all the reasons alleged or for any other reason.

They admit that the Interstate Commerce Commission made the finding quoted in paragraph (i), and they aver that the same is true and was based on substantial evidence, and except as thus admitted or explained they deny the facts and conclusions alleged in said paragraph (i).

168a With respect to paragraph (j)—

They deny the facts and conclusions alleged in lines 7 to 15 (to the comma), both inclusive, on page 40. Of the facts and conclusions alleged in lines 15 (from the comma) to 21 (to the semicolon), both inclusive, on page 40, they state that they are without knowledge and therefore they deny the same. They aver that cattle were driven from Harney County to Winnemucca, Nevada, before the railroad to Burns was constructed and before the Rogerson-Wells line was completed, and except as thus explained they deny the facts and conclusions alleged in lines 21 (from the semicolon) to 27 (to the semicolon), both inclusive, on page 40. They deny the facts and conclusions alleged in lines 27 (from the semicolon) to 31 (to the semicolon), both inclusive, on page 40. They aver that Alkali Lake is located within 12 or 15 miles of said cross-State line and that it would be feasible to build a branch line of railroad from said cross-State line to said Alkali Lake at comparatively low cost and that with the construction of said branch the development of the mineral salt deposits of Alkali Lake would be practicable and that the initial shipments therefrom would amount to not less than three carloads a day and that production and shipments would thereafter increase and that the same would constitute an unfailing source of traffic indefinitely into the future, and except as thus explained they deny the facts and conclusions alleged in lines 27 (from the semicolon) to 32, both inclusive, on page 40 and in lines 1 to 5 (to the semicolon), both inclusive, on page 41. They deny the facts and conclusions alleged in lines 5 (from the semicolon) to 8, both inclusive, on page 41. They aver by way of explanation that the pumping of water for irrigation in the territory adjacent to said cross-State line has been prevented from material expansion largely by reason of lack of railroad transportation facilities, which facilities would be afforded by the construction of said cross-State line. They aver that during the years 1909 to 1912 approximately 2,000 homesteaders settled upon agricultural lands in Harney and Lake Counties contiguous to the route of said cross-State line, upon the holding out of the petitioner

that it would begin the construction of said cross-State line and that said homesteaders made substantial improvements upon the lands homesteaded, built homes, barns, and fences and stocked their said homesteads with livestock and continued to live upon and to farm said homesteads for several years, but that by reason of the failure and neglect of the petitioner to construct said cross-State line, as announced and promised, said homesteaders were unable profitably to market their products, and because of this fact substantially all of them were forced to abandon and did abandon their said homesteads and improvements to their serious loss, detriment, and disadvantage.

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They admit that the Interstate Commerce Commission made the finding quoted in paragraph (k) and they aver that the same is true and was based on substantial evidence, and except as thus admitted or explained they deny that the facts and conclusions alleged in said paragraph (k) are true for the reason therein alleged or for any other reason.

They aver that California affords one of the principal markets for the products of the 10 counties of southwestern Idaho; they admit that parts of southwestern Idaho are semi-arid and they aver that there is successful production in said section both through dry farming and by means of irrigation and that such production will be largely increased upon the completion of the Owyhee and Vale irrigation projects now under construction, and that in respect of soil, climate, elevation, rainfall, products and natural resources generally, southwestern Idaho and the territory that would be tributary to the said cross-State line are essentially similar and except as thus admitted or explained they state that they are without knowledge of the facts and conclusions alleged in said paragraph (l).

They deny the facts and conclusions alleged in paragraph (m) on page 42.

They deny the facts and conclusions alleged in paragraph (n) on page 42.

They admit that the Interstate Commerce Commission made the finding quoted in paragraph (o) and they aver that the same is true and was based on substantial evidence, and except as thus admitted or explained they deny the facts and conclusions alleged in said paragraph (o) on page 42.

They deny that the facts and conclusions alleged in paragraph 52 on page 42 are true for any reason or reasons therein alleged or for any other reason.

24. Answering Article XXIV:

They state that they are without knowledge whether the Interstate Commerce Commission considered said docket No. 19680 and made its report and order therein under the conceptions and theories of the law applicable thereto as alleged in paragraphs (a) to (j), both inclusive, of paragraph 53 or in any of said paragraphs, and therefore they deny the facts and conclusions alleged in said para-

170a graph 53 and they aver that the allegations of said paragraph 53 are inadequate to portray or to reflect in full or at all the Interstate Commerce Commission's conceptions and theories of the law applicable to the issues in said docket No. 19680, and for greater certainty they refer to the Interstate Commerce Commission's report and order in said docket No. 19680 in their entirety, the contents of which the petitioner well knows.

With respect to paragraph 54—

They state that they are without knowledge of the facts and conclusions alleged in lines 31 and 32 on page 45 and in lines 1 to 4 (to the semicolon), both inclusive, on page 46, and, therefore, they deny the same and they deny the facts and conclusions alleged in lines 4 (from the semicolon) to 17, both inclusive, on page 46.

25. Answering Article XXV:

They admit that the cost of constructing and equipping said cross-State line will exceed $9,000,000; they deny the facts and conclusions alleged in lines 21 to 28 (to the comma), both inclusive, on page 46 and in lines 29 (from the semicolon) to 31 (to the semicolon), both inclusive, on page 46, and they deny the facts and conclusions alleged in lines 31 (from the semicolon) and 32, on page 46, and in lines 1 to 12, both inclusive, on page 47.

26. Answering Article XXVI:

They admit the facts and conclusions alleged in lines 13 to 18, both inclusive, on page 48, and deny that the remaining facts and conclusions alleged in paragraph 56 are true for the reasons stated therein or for any other reasons.

27. Answering Article XXVII:

They deny that the facts and conclusions alleged in paragraph 57 are true for all or any of the reasons therein stated or for any other reason.

28. Answering Article XXVIII:

They admit that petitioner's operations extend into Portland, Oregon, and into Tacoma, Seattle, Spokane, Walla Walla, and Yakima, Washington, and except as thus admitted they state that they are without knowledge of the facts and conclusions alleged in lines 31 and 32 on page 48 and in lines 1 to 20 (to the semicolon), both inclusive, on page 49; they deny that the facts and conclusions alleged in lines 20 (from the semicolon) to 25, both inclusive, are true for the reasons set out in paragraphs (a) to (f), both inclusive, or in any of them, of paragraph 58 or for any other

171a reason; they aver that to construct said cross-State railroad would cost approximately $9,000,000, and except as thus explained they state that they are without knowledge of the facts and conclusions alleged in paragraph (a) on page 49, and, therefore, they deny the same; they deny the facts and conclusions alleged in paragraphs (b) and (c) on pages 49 and 50; they aver that said cross-State line, if constructed in compliance with the order of the Interstate Commerce Commission in said docket No. 19680, would

constitute an auxiliary main line of the petitioner west of Ontario, Oregon, and an integral part of the petitioner's system of railroad and of the Union Pacific system lines, and except as thus explained they deny the facts and conclusions alleged in paragraph (d) on page 50; they state that they are without knowledge of the facts and conclusions alleged in paragraph (e), and, therefore, they deny the same; they admit the facts alleged in paragraph (f) on page 50; and they deny the conclusion alleged in paragraph 59.

Further answering, they aver that the matters and things set forth in the petition and sought to be put in issue before this court were all before the Interstate Commerce Commission in said docket No. 19680 and were fully heard and determined by it and were within its power and authority to hear and to determine under the provisions of the interstate commerce act and that in its report in writing which was made after full hearing and on due notice to all of the parties, which report states its conclusions together with its decision, order, or requirement in the premises, the matters and things of which complaint is made were fully considered by the Interstate Commerce Commission and were foreclosed by its findings of fact based on substantial evidence, of which the parties were advised.

They aver that the facts set forth in the Interstate Commerce Commission's report and order sought to be set aside, annulled, suspended, and enjoined and each and all of the same are true and correct.

Defendants specifically deny (a) any fact or facts in the petition or any part of the same which denies or deny or which seeks or seek to deny any fact or facts found by the Interstate Commerce Commission; (b) any fact or facts alleged in the petition or any part of the same which is or are inconsistent with any fact or facts found by the Interstate Commerce Commission, (c) any and all inferences of fact from any particular fact or facts alleged in the petition or in any part of the same which seeks or seek to deny or which is or are inconsistent with any facts or facts found by the Interstate Com-
172a merce Commission; (d) any fact or facts alleged in the petition or in any part of the same which sets up or set up or which seeks or seek to set up matters and things which were not before the Interstate Commerce Commission; (e) any fact or facts alleged in the petition or any part of the same which attacks or attack or which seeks or seek to attack the action of the Interstate Commerce Commission and to show facts other than those which the Interstate Commerce Commission has found and declared; (f) any allegations in the petition or in any part of the same which aver that facts were found by the Interstate Commerce Commission in its report and order which, as shown on the face thereof, were not so found; (g) any conclusions of law alleged and insisted upon in the petition or in any part of the same which are inconsistent with any conclusions of law held by the Interstate Commerce Commission; and (h) each and every allegation in the petition contained not herein specifically admitted or denied.

Wherefore, having fully answered, these intervening defendants pray that the petition be dismissed at the cost of the petitioner and for such other and further order as may be appropriate.

I. H. VAN WINKLE,
Attorney General of Oregon,
WILLIAM C. MCCULLOCH,
WM. P. ELLIS,
Solicitors for Public Service Commission of Oregon.
W. D. GILLIS,
Attorney General of Idaho,
J. M. THOMPSON,
Solicitors for Public Utilities Commission of the State of Idaho.

173a [*Duly sworn to by Frank J. Miller; jurat omitted in printing.*]

[File endorsement omitted.]

DEPARTMENT OF JUSTICE,
OFFICE OF THE ASSISTANT TO THE ATTORNEY GENERAL,
Washington, September 15, 1930.

GEORGE H. MARSH, Esq.,
Clerk, United States District Court,
Portland, Oregon.

Oregon-Washington Railroad & Navigation Company *v.* United States. Eq. No. 9113–E

DEAR SIR: This is to acknowledge the receipt on this date from William C. McCulloch, Esq., of copy of petition filed in the above-entitled case by him on behalf of the Public Service Commission of Oregon and Public Utilities Commission of the State of Idaho for leave to intervene, a true copy of the court's order permitting the interventions sought, and copy of answer filed by those interveners.

We have been advised that the case is definitely set for hearing before the specially constituted district court of three judges of September 29, 1930.

Yours very truly,

ELMER B. COLLINS,
Special Assistant to the Attorney General.

Filed September 20, 1930. G. H. Marsh, clerk, United States District Court, District of Oregon.

174a INTERSTATE COMMERCE COMMISSION,
OFFICE OF THE CHIEF COUNSEL,
Washington, September 15, 1930.

Hon. G. H. MARSH,
Clerk of the United States District Court for the District of Oregon,
Portland, Ore.

Re: Oregon-Washington R. & N. Co. *v.* United States. In equity E–9113

DEAR SIR: The Interstate Commerce Commission has to-day been served by Mr. William C. McCulloch with copy of petition of Public Service Commission of Oregon and of Public Utilities Commission of Idaho, for leave to intervene in the above-entitled suit, copy of the order of District Judge Bean permitting the intervention, and copy of the answer of said interveners. This is for the purpose of advising you that said service has been made upon us.

Very truly yours,

DANIEL W. KNOWLTON, *Chief Counsel.*

Filed September 20, 1930. G. H. Marsh, clerk, United States District Court, District of Oregon.

175a [Omitted]

176a In United States District Court

[Title omitted.]

Answer of the Public Service Commission of Oregon and of Public Utilities Commission of the State of Idaho, intervening defendants, to the petition in intervention of Southern Pacific Company

Filed September 29, 1930

These intervening defendants (averring that the order of the Interstate Commerce Commission in its docket No. 19680, enforcement of which is sought to be enjoined in and by this suit, did not and does not run in whole or in part against the Southern Pacific Company, and that the Southern Pacific Company has no standing in its own right to demand or to be accorded the relief sought and claimed in its petition in intervention, but not waiving the benefit of said averment or their rights thereunder by their specific admission, denial, denial for lack of knowledge or explanation as hereinafter alleged of the facts, conclusions, matters, and things contained in the petition in intervention of the Southern Pacific Company) for their answer to the petition in intervention of Southern Pacific Company say:

1. Answering Paragraph I:

They admit the facts alleged in Paragraph I.

2. Answering Paragraph II:

They admit the facts alleged in line 6 to 9 (to the comma), both inclusive, on page 2, and they aver that the order made by the Interstate Commerce Commission in its docket No. 19680 did not run and does not run in whole or in part against the Southern

177a Pacific Company and that the interest of the Southern Pacific Company in said docket No. 19680 terminated with the entry

of the decision of the Interstate Commerce Commission in said docket No. 19680 and in the making and entry of the order of the Interstate Commerce Commission in said docket No. 19680 on December 3, 1929, and except as thus explained state that they are without knowledge of the facts and conclusions alleged in lines 9 (from the comma) to 11 (to the period), both inclusive, on page 2. They state that they are without knowledge of the facts and conclusions alleged in lines 11 (from the period) to 15 (to the period), both inclusive, on page 2.

3. Answering Paragraph III:

They aver that the lines of railroad mentioned in lines 22 to 31, both inclusive, on page 2 are main lines in the same sense as the extension would be when built, the construction of which was required by the Interstate Commerce Commission in its order in said docket No. 19680, and as thus explained they admit the facts alleged in Paragraph III.

4. Answering Paragraph IV:

They state that they are without knowledge of the facts and conclusions alleged in Paragraph IV.

5. Answering Paragraph V:

They admit the facts alleged in lines 12 to 32 (to the comma), both inclusive, on page 3. They state that they are without knowledge of the facts and conclusions alleged in line 32 (from the comma) on page 3, and in line 1 on page 4.

6. Answering Paragraph VI:

They admit the facts alleged in lines 3 to 19, both inclusive, on page 4. They state that they are without knowledge of the facts and conclusions alleged in lines 19 (from the semicolon) to 22 (to the semicolon), both inclusive, on page 4. They admit the allegations contained in lines 22 (from the semicolon) to 32, both inclusive, on page 4, and in lines 1 to 4 (to the semicolon), both inclusive, on page 5. They aver that the route afforded by the Southern

178a Pacific Company for transcontinental business between western Oregon and points Ogden and east via its Cascade line, Klamath Falls, Alturas, Wendel, and Ogden is, between western Oregon points and eastern points, a route that is materially and substantially more direct and efficient than the Southern Pacific's alternate route via Roseville, California, between the same points of origin and destination, and that the route between the same points of origin and destination via the cross-State line required to be built by the order under attack in this suit would be materially and substantially more direct and efficient and economical than the Southern Pacific Company's route between the same points of origin and destination via its Cascade line, Klamath Falls, Alturas, Wendel, and Ogden, and except as thus explained they deny the facts and conclusions alleged in lines 4 (from the semicolon) to 9 to the semicolon), both inclusive, on page 5. They deny the facts and conclusions alleged in lines 9 (from the semicolon) to 11, both inclusive, on page 5.

7. Answering Paragraph VII:

They admit that a substantial volume of railroad traffic moving from western Oregon originates on the lines of Southern Pacific Company, and except as thus explained they deny the facts and conclusions alleged in lines 13 and 14 (to the semicolon), both inclusive, on page 5. They state that they are without knowledge of the facts and conclusions alleged in lines 14 (from the semicolon) to 17 (to the semicolon), both inclusive, on page 5. They admit the facts alleged in lines 17 (from the semicolon) to 19 (to the semicolon), both inclusive, on page 5. They admit, subject to check, the facts alleged in lines 19 (from the semicolon) to 26 (to the semicolon), both inclusive, on page 5. They state that they are without knowledge of the facts and conclusions alleged in lines 26 (from the semicolon) to 29 (to the semicolon), both inclusive, on page 5. They admit the facts alleged in lines 30 to 32, both inclusive, on page 5 and in lines 1 to 3 (to the semicolon), both inclusive, on
179a page 6. They admit, subject to check, the facts alleged in lines 3 (from the semicolon) to 16 (to the semicolon) both inclusive, on page 6. They state that they are without knowledge of the facts and conclusions alleged in lines 16 (from the semicolon) to 20 (to the semicolon), both inclusive, on page 6. They state that they are without knowledge of the facts and conclusions alleged in lines 21 to 28, both inclusive, on page 6.

8. Answering Paragraph VIII:

They deny the facts and conclusions alleged in lines 30 to 32, both inclusive, on page 6, and in lines 1 to 10 (to the period), both inclusive, on page 7, and in this connection they aver by way of explanation that the Southern Pacific Company's route from points in western Oregon via Klamath Falls and Alturas to Ogden, Utah, and to points east thereof is practicable and not unreasonably long as compared with the through route for such traffic over the Southern Pacific Company's line to Portland, Oregon, and thence over the lines of the Oregon-Washington Railroad & Navigation Company, the Oregon Short Line Railroad Company, and the Union Pacific Railroad Company, and that neverthless the Southern Pacific Company now has and for years past has had with the Oregon-Washington Railroad & Navigation Company, the Oregon Short Line Railroad Company, and the Union Pacific Railroad Company a through route and joint rates thereover via Portland, Oregon, for such traffic and that by the maintenance of said through route and joint rates via Portland, Oregon, the Southern Pacific Company voluntarily has waived in the past and now waives the retention to its own rails by it of the long haul on eastbound transcontinental traffic originating in western Oregon. With respect to the allegations contained in lines 10 (from the period) to 21, both inclusive, on page 7 they aver that upon the completion of said cross-State line the establishment of a through route thereover and over the lines of the Southern Pacific

Company and of joint rates via such through route would be
180a demanded in the public interest and by public convenience and necessity and that the establishment and use of such through route and of such joint rates thereover upon the same basis and in the same volume or amount as the joint rates contemporaneously in effect via the through route by way of Klamath Falls and Alturas would enable the Southern Pacific Company to operate its lines with substantially greater honesty, efficiency, and economy with respect to traffic originating in western Oregon than via its route through Alturas or via its alternative route through Roseville and would enable the Southern Pacific Company to make greater net earnings from its business to and from points in western Oregon than it could make by transporting the same via any other route, and except as thus explained they deny the facts and conclusions alleged in lines 10 (from the period) to 21, both inclusive, on page 7.

9. Answering Paragraph IX:

They state that they are without knowledge of the facts and conclusions alleged in lines 23 to 30 (to the period), both inclusive, on page 7. They aver that the volume of westbound traffic received by the Southern Pacific Company at Ogden and destined to western Oregon is smaller than the volume of traffic originating in western Oregon and delivered to the Union Pacific Railroad Company at Ogden, and except as thus explained they state that they are without knowledge of the facts and conclusions alleged in lines 30 (from the period) to 32, both inclusive, on page 7, and in lines 1 and 2 on page 8. They deny the facts and conclusions alleged in lines 3 to 8, both inclusive, on page 8.

10. Answering paragraph X:

They deny that the facts and conclusions alleged therein are or that any one of them is true for the reasons therein set forth or for any other reason and they aver that the Southern Pacific Company has no standing in its own right to set up or to make the allegations of fact and conclusions contained in Paragraph X of its petition in intervention or any of them with respect to any alleged rights
181a of the Oregon-Washington Railroad & Navigation Company, the petitioner in this suit.

11. Answering Paragraph XI:

They deny that the facts and conclusions alleged therein are or any one of them is true for the reasons therein set forth or for any other reason and they aver that the Southern Pacific Company has no standing in its own right to set up or to make the allegations of fact and conclusions contained in Paragraph XI of its petition in intervention or any of them with respect to any alleged rights of the Oregon-Washington Railroad & Navigation Company, the petitioner in this suit.

12. Further answering, they aver that the Southern Pacific Company has no standing in its own right to seek or to be accorded all or any of the relief sought in the prayer of its petition in interven-

tion and that the right to obtain the relief sought by the Southern Pacific Company in and by its petition in intervention as specified in the prayer thereof is vested solely in the Oregon-Washington Railroad & Navigation Company, the petitioner in this suit.

13. Further answering, they aver that the matters and things set forth in the petition in intervention of the Southern Pacific Company and sought to be put in issue before this court were all before the Interstate Commerce Commission in said docket No. 19680 and were fully heard and determined by it and were within its power and authority to hear and to determine under the provisions of the interstate commerce act and that in its report in writing which was made after full hearing and on due notice to all of the parties, which report states its conclusions together with its decision, order or requirement in the premises, the matters and things of which complaint is made were fully considered by the Interstate Commerce Commission and were foreclosed by its findings of fact based on substantial evidence, of which the parties were advised.

Wherefore, having fully answered, these intervening defendants pray that the petition in intervention of the Southern Pacific
182a Company may be dismissed at the cost of the Southern Pacific Company, and for such other and further order as may be appropriate.

I. H. VAN WINKLE,
Attorney General of Oregon.
WILLIAM C. MCCULLOCH,
WM. P. ELLIS,
Solicitors for Public Service Commission of Oregon.
W. D. GILLIS,
Attorney General of Idaho,
J. M. THOMPSON,
Solicitors for Public Utilities Commission of the State of Idaho.

[*Duly sworn to by O. C. Bortzmeyer and J. M. Thompson; jurats omitted in printing.*]

183a [File endorsement omitted.]

184a [Omitted.]

185a In United States District Court for the District of Oregon

No. E–9113. In equity

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, PETITIONER

vs.

UNITED STATES OF AMERICA, DEFENDANT; SOUTHERN PACIFIC COMPANY, Public Service Commission of Oregon, and Public Utilities Commission of Idaho, interveners

Opinion

Filed Jan. 29, 1931

Before RUDKIN and WILBUR, Circuit JJ., and MCNARY, District J.

RUDKIN, Circuit Judge:

May 24, 1927, the Public Service Commission of the State of Oregon filed its complaint with the Interstate Commerce Commission against the Oregon-Washington Railroad & Navigation Company, the Union Pacific Railroad Company, and a number of other railroads, alleging that the carriers named as parties to the proceeding had failed and refused to provide reasonable and adequate facilities of transportation by railroad to a large area within the State of Oregon; that such facilities were reasonably required in the interest of public convenience and necessity; that the expense of providing such facilities will not impair the ability of the carriers to perform their duty to the public, and praying for an order requiring some one or more of such carriers to construct a line of railroad between Crane, Oregon, on the east and Crescent Lake, or some adjacent point on the line of the Southern Pacific Company, on the west. After full investigation and hearing, the Commission made its order requiring the Oregon-Washington Railroad & Navigation Company to extend its line of railroad, now terminating at, or near, Burns, Oregon, to a connection with the Cascade line of the Southern Pacific Company, at, or near, Crescent Lake, Oregon,
and that the Union Pacific Railroad Company be, and it was
186a thereby, authorized to join in the construction and operation
of such extension and to finance if from current funds or by advances. The present proceeding was thereupon instituted in this court by the Oregon-Washington Railroad & Navigation Company, as petitioner, against the United States, as defendant, to set aside, annul and suspend the order of the commission and to permanently enjoin the government, its officers and agents, from enforcing, or attempting to enforce, the same, and for an interlocutory injunction pending the final hearing.

While many incidental and subsidiary questions are discussed in the able and comprehensive briefs filed by the respective parties, there are but two important and controlling questions in the case: First, the authority of the commission to order a railroad extension such as this under any circumstances, and, second, the sufficiency of the testimony to justify or support the order if authority for the same be found to exist.

The general situation may be briefly summarized as follows: The Union Pacific Railroad Company owns all of the capital stock of the Oregon Short Line Railroad Company, and the Oregon Short Line owns all but fifteen shares of the capital stock of the Oregon-Wash-

ington Railroad & Navigation Company. The present line of the Oregon-Washington Company extends from Portland, Oregon, to Huntington, Oregon, where it connects with the Oregon Short Line. The line of the Oregon Short Line extends from Huntington, Oregon, to Ogden, Utah, where it connects with the line of the Union Pacific Company, which extends from Ogden to Omaha, Nebraska. These three lines, together with the line of the Los Angeles and Salt Lake Railroad Company, extending from Salt Lake City, Utah, to Los Angeles, California, make up the Union Pacific System. In 1916 the Oregon-Washington Company completed a branch line from its main line at Ontario, Oregon, to Crane, Oregon, a distance of approximately 127 miles, which has since been operated by the Oregon Short Line under a lease. In 1924 the line in question was further extended to Burns, Oregon, a distance of about 30 miles. The extension now ordered is from a point at, or near, Crane, Oregon,
187a to a point at, or near, Crescent Lake, Oregon, as above stated, a distance of approximately 185 miles, and the estimated cost of the extension is from nine to eleven million dollars.

There is at present but one east and west line of railroad in eastern Oregon, extending along the southerly bank of the Columbia River, which forms the northern boundary of the State in part. A vast area in central and southeastern Oregon is thus left without reasonable or adequate transportation facilities, and the need for a line of railroad in that vicinity is apparent, assuming, of course, that there will be sufficient traffic along and over the line of the proposed road to justify its construction.

On the latter issue, the parties submitted to the commission elaborate and painstaking estimates of the tonnage available and potentially available for the first five years of operation and thereafter together with a like estimate of the revenues to be derived from such operation. These estimates were supported by other testimony and differed widely in their results, generally as much as one hundred per cent and often a great deal more. The traffic estimates furnished by the complainant before the commission showed that the gross revenues derived from operation for the first five years would approximate the entire cost of construction. Speaking generally, the commission accepted these estimates and rejected those offered by the railroad companies. We do not now understand that there is any claim that the extention of the line is not reasonaly required in the interest of public convenience and necessity, if the findings of the commission are supported by the testimony. Indeed, if the petitioner shared the optimism of the State and interstate commissions, we think it reasonably safe to say that the present suit would never have been brought, or even contemplated.

The argument of the petitioner is directed largely against the weight of the testimony submitted by the Oregon Commission before the Interstate Commerce Commission and accepted by that body. If we were at liberty to review this testimony independently of the

findings made by the commission, we might find no little difficulty in reaching the same conclusion. It might well be urged that the hopes and aspirations of those advocating the extension will never be fully realized; that the local traffic from the sparsely settled desert waste through which the line in large part extends will be much less than estimated, and that the traffic from southwestern Idaho to California points, and the traffic diverted from the Southern Pacific at the intersection will fall short of expectations. But we have no such general power of review. If the determination of the commission finds substantial support in the testimony, its findings are conclusive upon the courts, unless the commission has exceeded its power or has proceeded upon an erroneous theory of the law, or unless its action is so manifestly arbitrary and unreasonable as to virtually transcend the authority conferred upon it.

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"It is not for courts to weigh the evidence introduced before the commission * * * or to enquire into the soundness of the reasoning by which its conclusions are reached, * * * or to question the wisdom of regulations which it prescribes * * *." (Assigned Car Cases, 274 U. S. 564, 580.)

"But if the determination of the commission finds substantial support in the evidence, the courts will not weigh the evidence nor consider the wisdom of the commission's action." (Chicago, R. I. & P. R. Co. v. United States, 274 U. S. 29, 33.)

"The finding of reasonableness, like that of undue prejudice, is the determination of a fact by a tribunal 'informed by experience.' * * * This court has no concern with the correctness of the commission's reasoning, with the soundness of its conclusions, or with the alleged inconsistency with findings made in other proceedings before it." (Virginian Ry. v. United States, 272 U. S. 658, 665.)

"To consider the weight of the evidence or the wisdom of the order entered is beyond our province." (New England Division Cases, 261 U. S. 184, 204.)

See, also, United States v. Erie R. Co. (280 U. S. 98); Merchants' Warehouse Co. v. United States (44 F. (2d) 379).

In the light of these decisions, it seems quite manifest that the findings of the commission are not without substantial support in the testimony, and beyond this we are not at liberty to inquire.

Section 1, paragraph 18, of the transportation act of 1920 (49 U. S. C. A., sec. 1) provides, among other things, that no carrier by railroad subject to the act shall undertake the extension of its line of railroad, or the construction of a new line of railroad, or shall acquire or operate any line of railroad, or extension thereof, unless and until there shall first have been obtained from the commission a certificate that the present or future public convenience and necessity require or will require the construction, or operation, or construction and operation, of such additional or extended line. Paragraph 21 of the same section provides that the

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commission may, after hearing, in a proceeding upon complaint or upon its own initiative without complaint, authorize or require by order any carrier by railroad subject to the act, party to such proceeding, to provide itself with safe and adequate facilities for performing as a common carrier its car service as that term is used in the act, and to extend its line or lines; provided no such authorization or order shall be made unless the commission finds, as to such extension, that it is reasonably required in the interest of public convenience and necessity, or as to such extension or facilities that the expense involved therein will not impair the ability of the carrier to perform its duty to the public.

In the course of its opinion or decision the commission stated abstractly that testimony sufficient to warrant or justify a certificate of necessity under paragraph 18 would likewise warrant or justify an order requiring an extension of a line or lines under paragraph 21, and this ruling is assigned as error. The act of Congress does not attempt to define or prescribe the quantum of proof required in either case, and we need not consider whether the analogy is right or wrong, because, as already stated, the correctness of the reasoning of the commission, or the soundness of its conclusions, are no concern of the courts so long as its findings are supported by substantial competent testimony.

The finding that the expense of the extension will not impair the ability of the petitioner to perform its duty to the public is likewise challenged. If the petitioner is to be considered as a separate entity apart from the Union Pacific system, we do not understand that there is any contention that the cost or expense will not impair its ability to perform its duty to the public. On the other hand, if the commission was warranted or justified in taking into consideration the financial ability of the Union Pacific, we do not understand that there is any contention that the expense of the extension will materially impair the ability of that company to perform its duty to the public. But whether the commission was warranted or justi-

190a fied in taking into consideration the financial ability of the Union Pacific, and in authorizing that company to join in the construction and operation of the extension and to finance it from current funds, or by advances, presents a question of law which we need not consider, in view of our conclusions upon another branch of the case.

A consideration of the facts is not very material, if as a matter of law the Interstate Commerce Commission was without authority to require the carrier to make an extension of its line or lines such as is here involved. But we have deemed a summary of the controlling facts essential in order to comply with the rulings of the Supreme Court in this class of cases. (Railroad Commission *v.* Maxcy, 281 U. S. 82.)

The final question is, then, the authority of the commission to make the order in question under any view of the facts. We have already

given the substance of paragraph 21 of the act. The commission is there empowered to authorize or require a carrier by railroad subject to the act to provide itself with safe and adequate facilities for performing as a common carrier its car service, as that term is used in the act, "and to extend its line or lines." The defendant contends that the language "to extend its line or lines" is too plain to admit of construction; that it was the purpose and policy of the transportation act of 1920 to develop and maintain for the people of the United States an adequate railroad system, and that in ordering the extension of a line or lines the only limitations on the authority of the commission are those found in the act itself, namely, that the extension is reasonably required in the interest of public convenience and necessity and that the expense of the extension will not impair the ability of the carrier to perform its duty to the public.

The petitioner, on the other hand, contends that authority to require the extension of a line or lines is coupled with the authority to require a carrier to provide itself with safe and adequate facilities for performing its car service, as that term is used in the act, and that the only extensions contemplated or authorized were such as would afford adequate transportation facilities to the communities and industries in the territory served by the carrier. The
191a testimony of one of the commissioners before the Committee on Interstate Commerce of the United States Senate lends support to this view. Commissioner Clark there said:

"The thought underlying the second part of this suggestion is that a railroad having been permitted by public franchise, and the powers that go with it, to build into a given territory it should be required to properly serve and develop that territory, and in developed territory it is important to provide for the extension of short branch or spur lines or spur tracks to communities and industries that should be served and that can furnish sufficient traffic to justify such extension. In some States the State officials are authorized to require such extension, but in such cases they are necessarily primarily concerned with, if not confined to, consideration of State traffic. Some of the States have not vested such authority in any State official. Ordinarily, such extension would be desired for the purpose of facilities, or making possible, the transportation of State traffic. The desirability of uniformity is obvious. The exercise of Federal authority should not depend upon whether a State has acted and should not be different as to a State that has legislated on the subject and a State that has not legislated. It, therefore, seems desirable that Congress should extend its jurisdiction in this regard in a plenary way, and that where such extensions are desired in connection with the movement of presently existing or prospective interstate traffic and the carrier is unwilling to construct them it may, upon proper showing and after full hearing, be required to do so by the Federal tribunal." (Hearings before Committee on Inter-

state Commerce, United States Senate, 65th Congress, 3d session, on Extension of Tenure of Government Control of Railroads, vol. 1, p. 233.)

If such was the purpose of the amendment it should be so limited by the courts.

"We repeat, the amendment of 1906 was drawn by and recommended by the commission, and it may be assumed was not intended to have nor given larger import in the law than it had in the recommendation." (United States v. Pennsylvania R. R. Co., 242 U. S. 208, 227.)

While the courts have frequently been called upon to construe the term extension, as employed in Paragraph 18, as distinguished from spur, industrial, team, switching or side tracks, as employed in Paragraph 22, our attention has not been directed to any decision defining or deciding how far a line or lines may be extended within the purview of the extension provisions of the act. In Lancaster v. Gulf C. & S. F. Ry. Co. (298 F. 488, 490) it was said:

"The terms 'extension of line of railroad' and 'industrial track' have no clear and established restrictive definition, either in dictionaries or in railroad practice, which will permit of the case being settled by rule of thumb, but, on the contrary, these terms have a wide latitude of meaning, according to the context in which they are used. Since Congress has not undertaken to define the words used, and since it is plain that they may be, according to the angle of approach, given wide and varied meaning, it is evident that the purpose of the act must be drawn from its entire structure, and that purpose, together with the context in which the words are used, must at the last be the guide to the interpretation of the words at issue."

192a New York and Queens Gas Co. v. McCall (245 U. S. 345) and New York ex rel. Pub. Ser. Com. (269 U. S. 244) are cited in support of the order, but these cases involved orders directing the extension of gas mains, and have little application here. Gas, water, electric current, and telephone service must in the nature of things be brought to the consumer, but this is true of railroads to a limited extent only. Furthermore, the orders complained of in these cases simply required the gas companies to extend their facilities to consumers within the territory which the companies undertook, and were obligated, to serve. Many other cases might be cited, but the orders under consideration were of minor importance when compared with the order in this case. Wisconsin, etc., Co. v. Jacobson (179 U. S. 287) involved an order of the Railroad and Warehouse Commission of the State of Minnesota, requiring two railroad companies whose tracks intersected at a certain point to provide connecting tracks so that the cars of each company could be run onto the tracks of the other; Minneapolis, etc., R. R. v. Minnesota (193 U. S. 53) involved an order of the same commission requiring a railroad company to build and maintain a station house at a certain point on its

line; Atlantic Coast Line v. N. Car. Corp. Comm. (206 U. S. 1) involved an order requiring a railroad company to rearrange its schedules so as to make a convenient connection between its trains and those of another road passing a junction point; Missouri Pacific R. R. Co. v. Kansas (216 U. S. 262) involved an order requiring a railroad in the place of a mixed passenger and freight train; Grand Trunk R. Co. v. Michigan (231 U. S. 457) involved an order requiring various railroads to use their tracks in the city of Detroit for interchange of traffic; Chicago, Milwaukee & St. Paul Ry Co. v. Iowa (233 U. S. 334) involved an order requiring a railroad company to accept shipments of coal in carload lots when tendered in the cars of other railroad companies; Phoenix Ry. Co. v. Geary (239 U. S. 277) involved an order directing a street railroad company to double track its line for a distance of 10 blocks. In the latter case the court added, however: "Complainant is not required to open up new terri-
193a tory, but only to give better service upon a street already occupied by it under a public franchise."

On the other hand, in Atchison, T. & S. F. Ry. Co. v. Railroad Commission (160 Pac. 828) the Supreme Court of California in an able and well-considered opinion, annulled an order of the railroad commission of that State requiring a railroad company to construct a branch line twelve miles in length, holding that it constituted a taking of property without compensation and without due process of law. The court said:

"The issue to be determined is this: Has the railroad commission authority to require a railroad company to extend its line of railroad, or to build a new line, so as to connect with its existing line points that have not theretofore been connected and which the company has not undertaken to so connect? * * * The solution of the problem thus presented must be found in a definition of the character of the order complained of. Is the railroad commission, in ordering the construction of a railroad line, regulating the service which the petitioner has undertaken to give to the public, or is it compelling the railroad company to dedicate its property to a new service. If the former, the commission is acting within its jurisdiction; if the latter, it is attempting to exercise an authority which the statute either has not attempted or is unable to confer upon it. * * * A public utility, undertaking to supply a given public need, submits itself to the regulation and control of public authority with respect to the service which it has thus undertaken. Thus, a water company having a franchise to supply water to the inhabitants of a given city assumes the public duty of supplying that community with water. It may be compelled to extend its mains in order to furnish the service to such inhabitants. * * * So of companies furnishing gas, electric current, or telephone service. (1 Wyman on Pub. Ser. Corp., sec. 797.) But to require a public utility to devote its property to a service which it has never professed to render is to take that property, pro tanto, and such taking

can not be justified except under the power of eminent domain, i. e., upon just compensation. A railroad company, in constructing a line between given points, does not undertake to supply the transportation needs of any territory not reached by its lines. (1 Wyman, Pub. Ser. Corp., sec. 272.)"

And after quoting from Gt. Northern Ry. v. Minnesota (238 U. S. 340) and Chi., Mil. & St. P. R. R. Co. v. Wisconsin (238 U. S. 491) the opinion concluded:

"These quotations point to the essential ground of the invalidity of the order here in question. The supervision of service rendered by a railroad company is a proper matter for public regulation and control. The question whether a railroad company shall extend its lines to points not theretofore reached by it, whether, in other words, it shall engage in a new and additional enterprise, is one of policy to be determined by its directors. To compel a railroad company to apply its property to the construction and operation of a line of railroad which it does not desire to construct or operate is to take its property.

"As we have already indicated, we are cited to no authority which supports the power of the State, acting through its railroad commission, or otherwise, to compel the extension of a railroad line in the manner here attempted. On the contrary, such decisions as have come to our attention tend, rather, to deny the existence of any such power."

See, also, Southern Bell Tel. & Tel. Co. v. Town of Calhoun
194a (287 F. 381); Towers v. United Rys. & Electric Co. (95 Atl. 170); State v. Public Service Commission, 192 S. W. 958).

The views of the California Supreme Court as there expressed find support in many decisions of the Supreme Court of the United States. Thus, in Atlantic Coast Line v. N. Car. Corp. Comn., supra, at page 20, the court said:

"As the public power to regulate railways and the private right of ownership of such property coexist and do not the one destroy the other, it has been settled that the right of ownership of railway property, like other property rights, finds protection in constitutional guarantees, and, therefore, wherever the power of regulation is exerted in such an arbitrary and unreasonable way as to cause it to be in effect not a regulation but an infringement upon the right of ownership, such an exertion of power is void because repugnant to the due process and equal protection clauses of the fourteenth amendment."

And in Nor. Pac. Ry. v. North Dakota (236 U. S. 585, 595) the present Chief Justice said:

"But, broad as is the power of regulation, the State does not enjoy the freedom of an owner. The fact that the property is devoted to a public use on certain terms does not justify the requirement that it shall be devoted to other public purposes, or to the same use on other terms, or the imposition of restrictions that are

not reasonably concerned with the proper conduct of the business according to the undertaking which the carrier has expressly or impliedly assumed. If it has held itself out as a carrier of passengers only, it can not be compelled to carry freight. As a carrier for hire, it can not be required to carry persons or goods gratuitously. The case would not be altered by the assertion that the public interest demanded such carriage. The public interest can not be invoked as a justification for demands which pass the limits of reasonable protection and seek to impose upon the carrier and its property burdens that are not incident to its engagement."

Application of these principles to the case at bar can lead to but one conclusion. One of the dominant purposes of the order complained of was to require the petitioner to construct a line of railroad 185 miles in length in order that lumber traffic originating perhaps hundreds of miles from its present lines might find a shorter route to eastern markets, and that traffic from southwestern Idaho might find a shorter route to northern California points. Thus, the carrier was plainly required to devote its property to a service which it has never professed to render and to a service entirely beyond the scope of the undertaking which it has expressly or impliedly assumed.

195a In this connection our attention has been directed to the fact that the articles of incorporation of the petitioner, as they existed at the time the complaint before the commission was filed, authorized it to purchase, acquire, own, hold, construct, complete, equip, maintain, and operate certain railroads, including "that part of the railroad and telegraph lines projected and proposed to be constructed by the Oregon Eastern Railway Company consisting of (a) a line from Vale across the State of Oregon to a point at or near Odell in said State." Provisions of this kind in articles of incorporation are usually permissive, not contractual, and such is the case here. (Towers v. United Rys. & Electric Co., supra.) Indeed, if the provision was contractual it is not easy to understand how it could be enforced by the Interstate Commerce Commission.

Our conclusion is, then, that the provision of the transportation act of 1920 authorizing the Interstate Commerce Commission to require carriers to extend their line or lines is unconstitutional and void if it must be construed broadly and liberally, as was done by the commission in the present case. But we do not think that such construction is either necessary or permissible. If a statute is susceptible of two constructions, by one of which grave and doubtful constitutional questions arise and by the other of which such questions are avoided, it is the duty of the court to adopt the latter. United States v. Delaware & Hudson Co., 213 U. S. 366, 407; Texas v. Eastern Texas R. R. Co., 258 U. S. 204, 217. The extension provision of the transportation act may therefore well be limited to such extensions as are reasonably necessary to reach communities and industries in the territory which the carrier has professed to

serve or according to the undertaking which it has expressly or impliedly assumed. Such a construction will give full effect to the purpose of Congress and make the act conform to the practice then prevailing in many of the States. When the act is thus construed the order in question exceeds the authority of the commission and is void. Its enforcement must therefore be enjoined, and a decree will be entered accordingly.

[File indorsement omitted.]

196a [Omitted.]

197a In United States District Court for the District of Oregon

In equity, No. E–9113

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, PETITIONER

vs.

THE UNITED STATES OF AMERICA, DEFENDANT; SOUTHERN PACIFIC Company, Great Northern Railway Company, Public Service Commission of Oregon, Public Utilities Commission of Idaho, and Interstate Commerce Commission, interveners

Findings of fact and conclusions of law

Filed Jan. 29, 1931

At the November term of the District Court of the United States for the district of Oregon held at the United States Court room in the city of Portland, Oregon, on the 22nd day of January, 1931.

Present: The honorable Frank H. Rudkin, circuit judge; the honorable Curtis D. Wilbur, circuit judge; and the honorable John H. McNary, district judge.

This cause came on to be heard at the November term of said court and was argued by counsel, and upon consideration of the evidence and the record in said cause it appears that the material facts are as follows:

1. May 24, 1927, the Public Service Commission of the State of Oregon filed its complaint with the Interstate Commerce Commission against the Oregon-Washington Railroad & Navigation Company, the Union Pacific Railroad Company, and a number of other railroads, alleging that the carriers named as parties to the proceeding had failed and refused to provide reasonable and adequate facilities of transportation by railroad to a large area within the State of Oregon; that such facilities were reasonably required in the interest of public convenience and necessity; that the expense of providing

198a such facilities will not impair the ability of the carriers to perform their duty to the public, and praying for an order requiring some one or more of such carriers to construct a line of railroad between Crane, Oregon, on the east, and Crescent Lake, or some adjacent point on the line of the Southern Pacific Company, on

the west. After full investigation and hearing the Interstate Commerce Commission made its order requiring the Oregon-Washington Railroad & Navigation Company to extend its line of railroad, now terminating at, or near, Burns, Oregon, to a connection with the Cascade line of the Southern Pacific Company, at, or near, Crescent Lake, Oregon, and that the Union Pacific Railroad Company be, and it was thereby, authorized to join in the construction and operation of such extension and to finance it from current funds or by advances. In making said order the Interstate Commerce Commission relied for its authority upon section 1, paragraph 21 of the interstate commerce act.

2. The Union Pacific Railroad Company owns all of the capital stock of the Oregon Short Line Railroad Company and the Oregon Short Line owns all but fifteen shares of the capital stock of the Oregon-Washington Railroad & Navigation Company. The present line of the Oregon-Washington Railroad & Navigation Company extends from Portland, Oregon, to Huntington, Oregon, where it connects with the Oregon Short Line. The line of the Oregon Short Line extends from Huntington, Oregon, to Ogden, Utah, where it connects with the line of the Union Pacific Company, which extends from Ogden to Omaha, Nebraska. These three lines, together with the line of the Los Angeles & Salt Lake Railroad Company, extending from Salt Lake City, Utah, to Los Angeles, California, make up the Union Pacific system.

3. In 1916 the Oregon-Washington Company completed a branch line from a main line connection at Ontario, Oregon, to Crane, Oregon, a distance of approximately 127 miles, which has since been operated by the Oregon Short Line under a lease. In 1924 the line in question was further extended to Burns, Oregon, a distance of about 30 miles. The extension now ordered is 185 miles in
199a length; and the estimated cost of constructing it is from nine to eleven million dollars.

4. The record made before the Interstate Commerce Commission shows that if the petitioner, Oregon-Washington Railroad & Navigation Company, is to be considered as a separate entity apart from the corporations comprising the Union Pacific system, the cost and expense of constructing said extension will impair its ability to perform its duty to the public, but that if the financial ability of the Union Pacific system in its entirety is considered the cost and expense of constructing said extension will not materially impair the ability of the system to perform its duty to the public.

5. The proposed line in large part would extend through a sparsely settled desert waste which the petitioner has not undertaken or professed to serve. One of the dominant purposes of the order complained of was to provide for the construction of a new east and west line of railroad, whereby lumber traffic originating hundreds of miles from petitioner's present line may find a shorter route to eastern markets, and traffic from southwestern Idaho may find a shorter route to northern California points.

And upon consideration of the questions of law presented for determination the court concludes:

(a) The provision in section 1, paragraph 21, of the interstate commerce act with respect to the compulsory extension of the line or lines of carriers by railroad, if construed broadly and liberally as was done by the Interstate Commerce Commission in making the order complained of in this case, would be in violation of the fifth amendment to the Constitution of the United States and void.

(b) Said provision in paragraph 21 of section 1 of the interstate commerce act should be so construed as to limit the application of same by the Interstate Commerce Commission to such extension of the line or lines of a carrier by railroad as are reasonably necessary to enable such carrier to serve adequately the communities and industries in the territory which it has occupied and professed to serve.

(c) The Interstate Commerce Commission, in entering
200a the order complained of, exceeded its authority under the laws and Constitution of the United States, and said order is unlawful and void.

Dated this 29th day of January, 1931.

FRANK H. RUDKIN,
Circuit Judge.
CURTIS D. WILBUR,
Circuit Judge.
JOHN H. MCNARY,
District Judge.

[File endorsement omitted.]

201a [Omitted.]

202a In United States District Court for the District of Oregon

In equity, No. E–9113

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, PETITIONER

vs.

THE UNITED STATES OF AMERICA, DEFENDANT; SOUTHERN PACIFIC Company, Great Northern Railway Company, Public Service Commission of Oregon, Public Utilities Commission of Idaho, and Interstate Commerce Commission, interveners

Decree

Filed Jan. 29, 1931

At the November term of the District Court of the United States for the District of Oregon held at the United States court room in the city of Portland, Oregon, on the 22d day of January, 1931.

Present: The honorable Frank H. Rudkin, Circuit Judge; the honorable Curtis D. Wilbur, Circuit Judge; and the honorable John H. McNary, District Judge.

This cause came on to be heard at the November term of said court and was argued by counsel; and thereafter said court so constituted made and rendered its findings of fact and conclusions of law in said cause, and said findings and conclusions so made having been entered of record herein, now upon consideration thereof and of the evidence and record in said cause, it appearing that on the 3d day of December, A. D. 1929, the Interstate Commerce Commission made and rendered its order in a cause then and there pending before said Interstate Commerce Commission wherein the Public Service Commission of Oregon was complainant and Central Pacific Railway Company, Oregon-Washington Railroad & Navigation Company (petitioner herein), and others were defendants, said cause bearing docket number of said commission No. 19680, by the terms and provisions of which said order said Oregon-Washington Railroad &
Navigation Company, the petitioner herein, was ordered and
203a required to extend its line of railroad now terminating at or
nears Burns, Oregon, from or near a station thereon designated as Crane, Oregon, to a connection with the Cascade line of the Southern Pacific Company at or near Crescent Lake, Oregon, and was further required to commence the construction of said line of railroad or or before July 1, 1930, and to complete and place the same in operation before July 1, 1933; and that on the 19th day of June, 1930, said Interstate Commerce Commission entered its order in said cause, docket No. 19680, modifying its said order of December 3, 1929, by postponing said date on or before which construction must be commenced to January 1, 1931, but in no other respect, and that on the 20th day of December, 1930, said Interstate Commerce Commission again modified its said order in said cause 19680 by further postponing said date on or before which said construction must be commenced to April 1, 1931, but in no other respect.

And it appearing to the court that the order of said Interstate Commerce Commission of date December 3d, A. D. 1929, so modified as aforesaid, was and is unlawful and void and that the enforcement thereof would cause the petitioner herein irreparable injury and damage, and that petitioner has no adequate remedy at law in the premises.

Now, therefore, it was and is ordered, adjudged, and decreed that said order of said Interstate Commerce Commission of date December 3d, A. D. 1929, so modified as aforesaid, be and the same is hereby set aside and annulled, and that the defendant, its officers and agents, be and they are hereby perpetually enjoined from enforcing or attempting to enforce said order as so modified, and that said defendant and its officers and agents be and they are hereby perpetually enjoined from instituting or prosecuting any proceeding to recover any penalty or penalties from the petitioner by reason of

its refusal or neglect to comply with said order of the Interstate Commerce Commission, so modified as aforesaid.

204a Dated, January 29, 1931.

FRANK H. RUDKIN,
Circuit Judge.
CURTIS D. WILBUR,
Circuit Judge.
JOHN H. MCNARY,
District Judge.

[File endorsement omitted.]

205a [Omitted.]

206a In United States District Court

[Title omitted.]

Petition for appeal by Interstate Commerce Commission, public utilities commissioner of Oregon (successor of Public Service Commission of Oregon), and Public Utilities Commission of the State of Idaho

(Filed March 18, 1931)

Interstate Commerce Commission, public utilities commissioner of Oregon (successor of Public Service Commission of Oregon), and Public Utilities Commission of the State of Idaho, intervening defendants, feeling themselves aggrieved by the final decree of the United States District Court for the District of Oregon entered January 29, 1931, in the above-entitled cause, pray an appeal therefrom to the Supreme Court of the United States.

The particulars wherein they consider the final order or decree erroneous are set forth in the assignment of errors filed herewith and to which reference is hereby made.

They pray that a transcript of the record, proceedings, and papers on which the final decree was made and entered, duly authenticated, may be transmitted forthwith to the Supreme Court of the United States.

207a DANIEL W. KNOWLTON,
J. STANLEY PAYNE,
Solicitors for Interstate Commerce Commission.
I. H. VAN WINKLE,
Solicitor for Public Utilities Commissioner of Oregon (Successor of Public Service Commission of Oregon).
J. M. THOMPSON,
Solicitor for Public Utilities Commission of the State of Idaho.

[File endorsement omitted.]

208a [Omitted.]

209a In United States District Court

[Title omitted.]

Assignment of errors

Filed March 18, 1931

Interstate Commerce Commission, public utilities commissioner of Oregon (successor of Public Service Commission of Oregon), and Public Utilities Commission of the State of Idaho, intervening defendants, now come by their respective counsel, and in connection with their petition for appeal, file the following assignment of errors upon which they will rely on their appeal to the Supreme Court of the United States from the final decree of the District Court entered January 29, 1931.

The District Court erred:

1. In setting aside, annulling, and permanently enjoining the commission's order of December 3, 1929.

2. In holding that the order in question exceeds the authority of the commission and is void.

3. In holding that the extension provision of the transportation act (section 1 (21) of the interstate commerce act) is "limited to such extensions as are reasonably necessary to reach communities and industries in the territory which the carrier has professed to serve or according to the undertaking which it has expressly or impliedly assumed."

210a

4. In holding that because "one of the dominant purposes of the order complained of was to require the petitioner to construct a line of railroad 185 miles in length in order that lumber traffic originating perhaps hundreds of miles from its present lines might find a shorter route to eastern markets, and that traffic from southwestern Idaho might find a shorter route to northern California points," the carrier "was plainly required to devote its property to a service which it has never professed to render and to a service entirely beyond the scope of the undertaking which it has expressly or impliedly assumed."

5. In holding that section 1 (21) of the interstate commerce act "is susceptible to two constructions, by one of which grave and doubtful constitutional questions arise and by the other of which such questions are avoided."

6. In holding that the commission misconstrued section 1 (21) of the interstate commerce act.

7. In holding that "the provision of the transportation act of 1920 authorizing the Interstate Commerce Commission to require carriers to extend their line or lines (section 1 (21) of the interstate

commerce act) is unconstitutional and void if it must be construed broadly and liberally, as was done by the commission in the present case."

8. In holding that the construction placed by the commission on section 1 (21) of the interstate commerce act is neither necessary nor permissible.

9. In not dismissing the petition.

Wherefore, said intervening defendants pray that said final decree of January 29, 1931, be reversed and set aside in the particulars above enumerated, and that said order of the Interstate Commerce Commission dated December 3, 1929, be found and adjudged to be valid and lawful in all respects.

311a

DANIEL W. KNOWLTON,
J. STANLEY PAYNE,
Solicitors for Interstate Commerce Commission.
I. H. VAN WINKLE,
Solicitor for Public Utilities Commissioner of Oregon (Successor of Public Service Commission of Oregon).
J. M. THOMPSON,
Solicitor for Public Utilities Commission of the State of Idaho.

Service of the foregoing assignment of errors, and the receipt of a copy thereof, are hereby acknowledged this 18th day of March, 1931.

ROY F. SHIELDS,
One of Solicitors for Oregon-Washington Railroad & Navigation Company.
ALFRED A. HAMPSON,
Solicitor for Southern Pacific Company.
CHARLES A. HART,
Of Solicitors for Great Northern Railway Company.

[File endorsement omitted.]

212a [Omitted.]

213a In United States District Court for the District of Oregon

In equity, No. E–9113

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, PETITIONER

v.

UNITED STATES OF AMERICA, DEFENDANT, AND INTERSTATE COMMERCE Commission, Public Utilities Commissioner of Oregon (successor of Public Service Commission of Oregon), and Public Utilities Commission of the State of Idaho, intervening defendants

Order allowing appeal

Filed March 18, 1931

In the above-entitled cause, Interstate Commerce Commission, public utilities commissioner of Oregon (successor of Public Service Commission of Oregon), and Public Utilities Commission of Idaho, intervening defendants, having made and filed their petition praying an appeal to the Supreme Court of the United States from the final decree of this court entered January 29, 1931, and having also made and filed an assignment of errors, and having in all respects conformed to the statutes and rules of court in such case made and provided:

It is ordered and decreed that the appeal be, and the same is hereby, allowed as prayed and made returnable within thirty (30) days from the date hereof, and the clerk is directed to transmit forthwith a properly authenticated transcript of the record, proceedings, and papers on which the decree was made and entered.

Dated March 18th, 1931.

JOHN H. MCNARY,
United States District Judge.

[File endorsement omitted.]

214a [Omitted.]

215a In United States District Court

[Title omitted.]

Summons and severance

Filed March 18, 1931

To the United States of America:

You are hereby invited to join with the Interstate Commerce Commission, the public utilities commissioner of Oregon (successor of the Public Service Commission of Oregon), and the Public Utilities Commission of the State of Idaho, intervening defendants, in an appeal to the Supreme Court of the United States which they will seasonably prosecute from the final decree of the district court entered January 29, 1931, setting aside, annulling, and enjoining the enforcement of the order of the Interstate Commerce Commission in the proceeding entitled Public Service Commission of Oregon v. Central Pacific Ry Co. et al., docket No. 19680, in the above-entitled cause, in which you are defendant.

In the event of your failure to join, Interstate Commerce Commission, public utilities commissioner of Oregon (successor of Public Service Commission of Oregon), and Public Utilities Commission of

the State of Idaho will prosecute the appeal for the reversal of said final decree of the district court without joining you.

March 12, 1931.

216a DANIEL W. KNOWLTON,
J. STANLEY PAYNE,
Solicitors for Interstate Commerce Commission.
I. H. VAN WINKLE,
Solicitor for Public Utilities Commissioner of Oregon (Successor of Public Service Commission of Oregon).
J. M. THOMPSON,
Solicitor for Public Utilities Commission of the State of Idaho.

Service of the foregoing summons and severance and the receipt of a copy thereof are hereby acknowledged this 12th day of March, 1931.

THOMAS D. THACHER, *Solicitor General.*

[File indorsement omitted.]

217a [Omitted.]

218a IN UNITED STATES DISTRICT COURT

[Title omitted.]

Stipulation re statement of evidence

Filed Feb. 6, 1932

It is hereby stipulated by the parties, including the interveners, acting by their respective counsel, for the purpose of settling the record for the appeal to the Supreme Court of the United States, that:

1. The within and foregoing statement of evidence is a true and correct statement in narrative form of all the oral testimony introduced before the Interstate Commerce Commission in the proceeding styled Oregon Public Service Commission v. Central Pacific Railway Company et al., docket No. 19680, as the same is contained in the official typewritten transcript thereof on file with the Interstate Commerce Commission, a copy of which, duly certified by said Commission, was offered in evidence by the petitioner in the District Court in the above-entitled case as Exhibit No. 2; and said oral testimony, together with the documentary exhibits referred to therein which were offered and received in evidence before the Interstate Commerce Commission in the above-entitled proceeding, copies of which, duly certified by said commission, were introduced in evidence by the petitioner in the District Court in the above-entitled case collectively as Exhibit No. 3, constituted all the evidence introduced before the Interstate Commerce Commission in the aforesaid proceeding; and said Exhibits Nos. 2 and 3, together

219a with Exhibits 1, 4, 5, 6, 7, 8, and 9, introduced by petitioner, and Exhibits A, B, C, D, and E, introduced by defendants, constituted all the evidence submitted at the hearings before the District Court in the above-entitled case.

2. That the said statement in narrative form of the oral testimony introduced before the Interstate Commerce Commission in the above-entitled proceeding shall be substituted for the certified copy of the original testimony of the witnesses and shall have the same force and effect upon appeal as the original testimony.

3. Petitioner's Exhibits 1, 3, 4, 5, 6, 7, 8, and 9 and defendants' Exhibits A, B, C, D, and E shall stand as original exhibits and shall be transmitted on appeal instead of transcripts thereof; and the aforesaid statement in narrative form of the testimony before the Interstate Commerce Commission, together with this stipulation and the order of the court pursuant thereto, shall likewise be so transmitted.

J. STANLEY PAYNE,
Solicitor for Interstate Commerce Commission.
I. H. VAN WINKLE,
Solicitor for Public Utilities Commission of Oregon
(Successor of Public Service Commission of Oregon)
J. M. THOMPSON,
Solicitor for Public Utilities
Commission of the State of Idaho.
ARTHUR C. SPENCER,
Solicitor for Oregon-Washington
Railroad & Navigation Company
ALFRED A. HAMPSON,
Solicitor for Southern Pacific Company
CHARLES A. HART,
Solicitor for Great Northern Railway Company
CHARLES A. HART,
Solicitor for Oregon Trunk Railway.
CHARLES A. HART,
Solicitor for Oregon Electric Railway Company

[File endorsement omitted.]

220a [Omitted.]

221a In United States District Court

[Title omitted.]

Order approving statement of evidence, etc.

Filed February 8, 1932

It appearing that a condensed statement in narrative form of the evidence taken before the Interstate Commerce Commission has been prepared from petitioner's Exhibit No. 2 introduced in evidence in

this court upon the trial of this cause, and that said statement has been lodged with the clerk of this court, and that by stipulation entitled "Stipulation re statement of evidence," filed in this court on the 6th day of February, 1932, the parties to said stipulation have approved said condensed statement of evidence and agreed that same may be substituted for said petitioner's Exhibit 2 on the appeal of this cause to the Supreme Court of the United States;

And it further appearing, in the opinion of the presiding judge of this court, that it will be necessary and proper that the following original papers introduced in evidence in this court upon the trial of this cause, to wit, petitioner's Exhibits 1 and 3 to 9, inclusive, and defendants' Exhibits A, B, C, D, and E, be inspected in the Supreme Court of the United States upon the appeal thereof;

It is therefore ordered that said condensed statement in narrative form so prepared from petitioner's Exhibit 2 be and the same is hereby approved and substituted for said petitioner's Exhibit 2 and made a part of the record on appeal in this cause, and the original thereof shall be transmitted by the clerk of this court
222a to the clerk of the Supreme Court of the United States instead of a transcript thereof.

It is further ordered that petitioner's Exhibits 1, 3, 4, 5, 6, 7, 8, and 9 and defendants' Exhibits A, B, C, D, and E, and each and all thereof be, and the same are hereby made a part of the record in this cause upon appeal thereof to the Supreme Court of the United States and said original exhibits shall be transmitted by the clerk of this court to the clerk of the Supreme Court of the United States along with the transcript herein, for the consideration of the Supreme Court as a part of the record on appeal herein.

The aforesaid exhibits, namely, petitioner's Exhibits 1 to 9, inclusive, and defendants' Exhibits A, B, C, D, and E, contain all the evidence submitted to this court on the hearings of this cause.

Dated, this 8th day of February, 1932.

JOHN H. MCNARY,
United States District Judge.

[File indorsement omitted.]

223a [Omitted.]

224a In United States District Court

[Title omitted.]

Præcipe for transcript of record

Filed Jan. 25, 1932

To the CLERK:

Please prepare a transcript of the record in the above-entitled cause in the matter of the appeal therein, and include in said transcript, in the order given below, the following matter, viz:

1. Petition.

2. Proof of service of petition upon the Interstate Commerce Commission, viz, notice of service and acknowledgment thereof.

3. Proof of service of petition upon the Attorney General of the United States, viz, notice of service and acknowledgment thereof.

4. Order entered June 27, 1930, allowing defendant to August 1, 1930, to file answer.

5. Stipulation dated June 26, 1930, agreeing to amendment of petition by interlineation, and order entered July 10, 1930, allowing amendment.

6. Supplemental petition filed July 10, 1930.

7. Second supplemental petition.

8. Petition of Southern Pacific Company for leave to intervene and order granting said petition.

9. Petition of Public Service Commission of Oregon and Public Utilities Commission of the State of Idaho for leave to intervene and order granting said petition.

225a 10. Intervention of Interstate Commerce Commission.

11. Petition of Great Northern Railway, Oregon Trunk Railway, and Oregon Electric Railway Company for leave to intervene, and order granting said petition.

12. Answer of United States of America.

13. Answer of Interstate Commerce Commission.

14. Answer of Public Service Commission of Oregon and Public Utilities Commission of the State of Idaho.

15. Answer of Public Service Commission of Oregon and Public Utilities Commission of the State of Idaho to petition of Southern Pacific Company for leave to intervene.

16. Opinion of the court by Circuit Judge Rudkin.

17. Court's finding of facts and conclusions of law.

18. Final decree.

19. Petition for appeal.

20. Citations on appeal.

21. Assignment of errors.

22. Order allowing appeal.

23. Summons and severance to the United States of America.

24. Statement of the evidence in condensed, narrative form, agreed to by the parties and approved by order of the court. (NOTE.—The original of this statement of the evidence, instead of a transcript thereof, is to be transmitted to the clerk of the Supreme Court, under order of the District Court.)

25. Stipulation re statement of evidence.

26. Order of the District Court approving statement of the evidence in condensed, narrative form, and containing directions in respect of transmitting exhibits and statement of evidence in original form.

27. Petitioner's Exhibits 1, 3, 4, 5, 6, 7, 8, and 9 and defendants' Exhibits A, B, C, D, and E. (NOTE.—The originals of these exhibits, instead of transcripts thereof, are to be transmitted to the clerk of the Supreme Court, under order of the District Court.)

28. This præcipe.

226a 29. Docket entries in their proper order.

J. STANLEY PAYNE,
Solicitor for Interstate Commerce Commission.
I. H. VAN WINKLE,
Solicitor for Public Utilities Commission of Oregon (Successor of Public Service Commission of Oregon).
J. M. THOMPSON,
Solicitor for Public Utilities Commission of the State of Idaho.

We have read the above præcipe and do not desire to file a separate præcipe indicating any additional matter to be included.

ARTHUR C. SPENCER,
Solicitor for Oregon-Washington Railroad & Navigation Company.
ALFRED A. HAMPSON,
Solicitor for Southern Pacific Company.
CHARLES A. HART,
Solicitor for Great Northern Railway.
CHARLES A. HART,
Solicitor for Oregon Trunk Railway.
CHARLES A. HART,
Solicitor for Oregon Electric Railway Company.

[File endorsement omitted.]

227a [Omitted.]

228a In United States District Court

E–9113

OREGON-WASHINGTON RAILROAD & Navigation Company, petitioner	Attorneys: Henry W. Clark, J. M. Souby, Arthur C. Spencer, Roy F. Shields, for plaintiff.
vs.	
UNITED STATES OF AMERICA, defendant	Elmer B. Collins, special assistant to the Attorney General, for defendant.
INTERSTATE COMMERCE COMMISSION, intervening defendant	Daniel W. Knowlton, J. Stanley Payne.
PUBLIC SERVICE COMMISSION OF Oregon, intervening defendant; PUBLIC UTILITIES COMMISSION OF Idaho, intervening defendant	I. H. Van Winkle, William C. McCulloch, Wm. P. Ellis, W. D. Gillis, J. M. Thompson.
SOUTHERN PACIFIC COMPANY, Invening plaintiff	Dey, Hampson & Nelson, Ben C. Dey, Guy V. Shoup, Alfred A. Hampson.
GREAT NORTHERN RAILWAY, Oregon Trunk Railway, and Oregon Electric Railway Company, intervening plaintiffs	Carey, Hart, Spencer & McCulloch.

Docket entries

1930

May 28. Filed petition.
28. To 2 copies of petition (furnished) 454 fol. ea., and 2 certificates.
June 5. Filed 2 proofs of service (on Attorney General and Interstate Commerce Comm.).
10. Filed and entered order setting application for interlocutory injunction for hearing on June 30, 1930.
27. Entered order allowing deft. to Aug. 1, 1930, to file answer.
July 10. Filed stipulation to amend petition.
" " and entered order to amend petition.
" " supplemental petition.
30. Filed answer of U. S.
Aug. 25. Filed intervention of Interstate Commerce Commission.
" " answer of " " "
Sept. 10. " petition of Pub. Ser. Comm. of Oregon and Pub. Utilities Comm. of Idaho for leave to intervene.
10. Filed and entered order allowing intervention.
10. " answer of Public S. of Oregon and Pub. Util. Comm. of Idaho.
16. Filed and entered order allowing Southern Pacific Co. to intervene.
18. Filed petition in intervention of Southern Pacific Co.
20. Filed acceptance by Interstate Commerce Commission of Intervention of Pub. Service Commission of Oregon and Idaho.
" Filed acceptance by Attorney General of Service of Intervention of Public Service Comm. of Oregon and Idaho.
26. Filed and entered order allowing Gt. Northern Ry., Northern Ry., Oregon Trunk Ry., and Oregon Electric Railway Co. to intervene.
26. Filed petition in intervention of Gt. Northern, Oregon Trunk, and Oregon Electric.
29. Filed stipulation in re documentary evidence.
" Filed answer of Public Service Commission of Oregon & Public Utilities Commission of Idaho to Intervention of Southern Pacific Co.
29. Filed and entered order allowing amendment to bill.
29. Record of final hearing, order allowing Interstate Commerce Commission 30 days to file brief and plaintiff 10 days to file answering brief. (Judges Dietrich, Bean, McNary.)
29. Filed complainants' brief.
29. Filed transcript of evidence.
29. Filed exhibits: Plaintiff's 1 to 9, inc.; defts.' A to D, inc.
Nov. 14. Filed brief of Public Service Comm. of Oregon et al.
Dec. 9. Record of final hearing (before Rudkin, Circuit Judge, Bean and McNary, District Judges).

1930

229a Dec. 9. Filed defendants' Ex. E.
19. Filed brief of Interstate Commerce Commission.
29. Filed plaintiffs' reply brief and 2 copies.

1931

Jan. 15. Filed petitioners' reply brief.
20. " and entered order for leave to file 2nd supplemental petition.
20. " 2nd supplemental petition.
22. Record of final hearing (before Rudkin & Wilbur, circuit judges, and McNary, district judge).
29. Filed opinion of court.
29. Filed & entered findings of fact & conclusions of law. (Judges Rudkin, Wilbur, McNary.)
29. " " " decree. (Judges Rudkin, Wilbur, McNary.)
Feb. 19. Filed præcipe of plaintiff for copies of findings & decree & direction to mail copies to defendants & intervening defts.
" Mailed certified copy of findings & decree to J. Stanley Payne, atty. for Interstate Commerce Commission; Geo. Neuner, U. S. attorney; Wm. C. Ellis, atty. for Public Service Commission of Oregon; and J. M. Thompson, atty. for Public Utilities Commission of Idaho.
" To 4 certified copies findings and decree, at request A. C. Spencer.
To certified copy opinion for Oregon Public Service Comm.
25. Filed acknowledgment by Pub. Service Comm. of Oregon of receipt of copy of findings & decree.
Mar. 18. Filed summons and severance on appeal by Interstate Commerce Commission.
18. Filed petition for appeal.
18. " assignment of errors.
18. " and entered order allowing appeal.
18. " citation on appeal, O.-W. R. & N. Co., Southern Pacific Company, Great Northern Railway Company.
Dec. 14. Lodged 9 volumes of statement of evidence.
14. Filed citation on appeal, to Oreg. Trunk Ry. Co. and Oreg. Electric Ry. Co.

1932

Jan. 25. " præcipe for transcript.
Feb. 6. " stipulation relative to statement of the evidence.
8. " & entered order relative to statement of the evidence and to send original exhibits & original statement of evidence to Supreme Court.
" Filed statement of the evidence (9 volumes).

230a In United States District Court

Clerk's certificate

I, G. H. Marsh, clerk of the District Court of the United States for the District of Oregon, do hereby certify that the foregoing pages, numbered from 6a to 229a, inclusive, constitute the transcript of record upon the appeal in a cause in said court, numbered upon its records E–9113, in which the Oregon-Washington Railroad & Navigation Company is petitioner, the United States of America is defendant; the Southern Pacific Company, the Great Northern Railway Company, the Oregon Trunk Railway, and the Oregon Electric Railway Company are intervening plaintiffs, and the Interstate Commerce Commission, the Public Service Commission of Oregon, and the Public Utilities Commission of the State of Idaho are intervening defendants; in which cause the said intervening defendants, the Interstate Commerce Commission, the public utilities commissioner of Oregon (successor to the Public Service Commission of Oregon), and the Public Utilities Commission of the State of Idaho are appellants, and the petitioner, Oregon-Washington Railroad & Navigation Company, the intervening plaintiffs, Southern Pacific Company, Great Northern Railway Company, Oregon Trunk Railway, and Oregon Electric Railway Company are appellees; that the said transcript has been prepared by me in accordance with the præcipe for transcript filed by said appellants, and is a full, true, and complete transcript of the record and proceedings had in said court in said cause, in accordance with the said præcipe, as the same appear of record and on file at my office and in my custody.

I further certify that the original citation to the Oregon-Washington Railroad & Navigation Company, the Southern Pacific Company, and the Great Northern Railway Company, and the original citation to the Oregon Trunk Railway, and the Oregon Electric Railway Company are attached to the foregoing transcript and are returned to the Supreme Court of the United States with the said transcript annexed.

I further certify that pursuant to order of the said District Court of the United States for the District of Oregon there is transmitted to the Supreme Court of the United States with the said transcript of record and as a part thereof the original statement of the evidence and original exhibits, as follows: Petitioners' Exhibits 1, 3, 4, 5, 6, 7, 8, and 9, and defendants' Exhibits A, B, C, D, and E.

I further certify that the cost of the following transcript is $60.85, and that the same has been charged as constructive earnings from the United States.

In testimony whereof I have hereunto set my hand and affixed the seal of said court, at Portland, in said district, this 10th day of March, 1932.

[SEAL.]

G. H. MARSH, *Clerk.*

[File endorsement omitted.]

231a In United States District Court for the District of Oregon

In equity, No. E–9113

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, PETITIONER

v.

UNITED STATES OF AMERICA, DEFENDANT, AND INTERSTATE COMMERCE Commission, Public Utilities Commissioner of Oregon (successor of Public Service Commission of Oregon), and Public Utilities Commission of the State of Idaho, intervening defendants

Statement of the evidence

Filed Feb. 8, 1932

This cause came on for hearing on September 29, 1930, before the late Circuit Judge Dietrich, the late Circuit Judge Bean, and District Judge McNary. Owing to the death of Circuit Judge Dietrich the cause was reheard December 9, 1930, by Circuit Judge Rudkin, the late District Judge Bean, and District Judge McNary. Owing to the death of District Judge Bean the cause was again heard January 22, 1931, by Circuit Judges Rudkin and Wilbur and District Judge McNary. At all three hearings the petitioner was represented by its solicitors, Arthur C. Spencer and Roy F. Shields; the United States, by George Neuner, United States Attorney for the District of Oregon; the Interstate Commerce Commission, by J. Stanley Payne, its assistant chief counsel; the Public Service Commission of Oregon, by William C. McCulloch and William P. Ellis; the Public Utilities Commission of Idaho, by J. M. Thompson; the Southern Pacific Company, by Alfred A. Hampson; the Great Northern Railway, the Oregon Trunk Railway, and the Oregon Electric Railway Company, by Charles A. Hart.

232a *Offers in evidence*

There were offered and received in evidence petitioner's Exhibits 1 to 9, inclusive, and defendants' Exhibits A, B, C, D, and E, which were as follows:

Exhibit No. 1. Stipulation regarding introduction in evidence before the district court of certified copies of documents on file with Interstate Commerce Commisson.

Exhbit No. 2. Certified copy of transcript of the testimony introduced before the Interstate Commerce Commission in the proceeding styled docket No. 19680, Oregon Public Service Commission v. Central Pacific Railway Company et al.

Exhibit No. 3. Certified copy of the exhibits received in evidence before the Interstate Commerce Commission in said docket No. 19680.

Exhibit No. 4. Certified copy of complaint filed May 4, 1927, with Interstate Commerce Commission, by Public Service Commission of Oregon, and joint answer of Des Chutes Railroad Company, Oregon Short Line Railroad Company, Oregon-Washington Railroad & Navigation Company, and Union Pacific Railroad Company to said complaint, in docket No. 19680, Oregon Public Service Com. v. Central Pacific Ry Co. et al.

Exhibit No. 5. Certified copies of joint answer of Spokane, Portland & Seattle Railway Company, Oregon Trunk Railway, and Oregon Electric Railway Company, of answer of Great Northern Railway Company, of joint answer of Central Pacific Railway Company and Southern Pacific Company, and of answer of Northern Pacific Railway Company in said docket No. 19680.

Exhibit No. 6. Certified copy of brief submitted to Interstate Commerce Commission by complainant in said docket No. 19680.

233a Exhibit No. 7. Certified copy of report and order of Interstate Commerce Commission, entered December 3, 1930, in said docket No. 19680.

Exhibit No. 8. Report of Interstate Commerce Commission in construction of lines in eastern Oregon.

Exhibit No. 9. Certified copy of brief submitted to Interstate Commerce Commission by complainant in No. 14392, Public Service Commission of Oregon v. Central Pacific Railway Company.

Exhibit A. Articles incorporation Oregon-Washington Railroad & Navigation Company.

Exhibit B. Supplemental articles incorporation Oregon-Washington Railroad & Navigation Company.

Exhibit C. Resolution board of directors Oregon-Washington Railroad & Navigation Company, line Crane to Burns.

Exhibit D. Reply of Public Service Commission of Oregon.

Exhibit E. Certified copy page 3 carriers' protest.

The following is a condensed statement in narrative form of the testimony introduced before the Interstate Commerce Commission in said docket No. 19860:

1 *Narrative of the evidence before the Interstate Commerce Commission*

PORTLAND, OREGON, *August 2, 1928—10.00 o'clock a. m.*

Before Hon. FRANK MCMANAMY, Commissioner; Mr. JOHN L. ROGERS, Examiner

(Pursuant to notice)

Colloquy

Comr. MCMANAMY. The Interstate Commerce Commission has assigned for hearing at this time and place docket No. 19680, this being

the case of the Public Service Commission of Oregon against the Central Pacific Railway Company, the Des Chutes Railroad Company, the Great Northern Railroad Company, Northern Pacific Railway Company, Oregon Electric Railway Company, Oregon Short Line Railroad Company, Oregon Trunk Railway, Oregon-Washington Railroad & Navigation Company, Southern Pacific Company, Spokane, Portland & Seattle Railway Company, and Union Pacific Railroad Company.

Petitions for intervention have been granted on behalf of the Public Utilities Commission of Idaho, Grants Pass Chamber of Commerce, Ontario Commercial Club, Douglas County, Oregon, Roseburg, Oregon Chamber of Commerce, Coos County Chamber of Commerce, Portland Chamber of Commerce of Portland, Oregon; Lane County Court, Springfield Chamber of Commerce, Eugene Chamber of Commerce, Portland Traffic & Transportation Association, Grant County, Oregon, Burns Chamber of Commerce, Harney County, Oregon, Albany Chamber of Commerce, County Court of Malheur County, Oregon, Willamette Valley Lumbermen's Association.

2 The complaint in this case alleges, in substance, that defendants have failed and refused, and still fail and refuse, to provide a large area within the State of Oregon with (5) adequate and reasonable facilities of transportation by railroad, and that such facilities are demanded by public interest, convenience and necessity, and that the expense involved in furnishing such facilities will not impair the ability of defendants, or any of them, to perform their duty to the public.

It is alleged that by reason of the alleged facts defendants unlawfully, in violation of sections 1, 15, and 15–A of the interstate commerce act, have failed and refused, and still fail and refuse, to give due consideration to the transportation needs of the State of Oregon and to the necessity under honest, efficient, and economical management of enlarging their existing transportation facilities in order to provide the people of the State of Oregon with adequate transportation, and to that end extend their lines and to operate the same substantially as demanded in the complaint.

The commission is asked to issue an order commanding the defendants to cease and desist from these alleged violations of the act, and requiring some one or more of them to extend and construct a line of railroad between Crane or Harriman, Oregon, on the east, and Crescent Lake or some adjacent point on the line of the Southern Pacific Company on the west, and commanding defendants to establish and maintain just and reasonable through routes and joint rates with such (6) extensions, and just and reasonable divisions of such joint rates, and just and reasonable terms and conditions under which such through routes shall be operated, and such common use of extensions as may be reasonable and neces-

3

sary, and that such other details and further orders or requirements be made as the comimssion may consider proper in the premises.

Is that a substantial statement of the issues?

Mr. ELLIS. It is, Mr. Commissioner.

Comr. MCMANAMY. Are there other petitions for intervention to be filed?

Mr. DEARMOND. H. H. DeArmond; if the commissioner please, I desire to file, on behalf of the city of Bend and the Bend Chamber of Commerce. Shall I make service on the other interveners?

Exam. ROGERS. All parties.

Comr. MCMANAMY. All parties to the case should receive petitions of intervention.

Are there other petitions for intervention?

Mr. BECHTELL. If the commissioner please, L. M. Bechtell, on behalf of the city of Prineville, Oregon, Crook County, and the Prineville Businessmen's Club of Prineville, Oregon, petition of intervention.

Comr. MCMANAMY. Any other intervening petitions? Without objections, these petitions will be granted. (7.)

(Said petition in intervention of city of Prineville, Crook County, Oregon, and Prineville Businessmen's Club, and said petitions in intervention of the city of Bend and Bend Chamber of Commerce were thereupon received.)

4 Comr. MCMANAMY. Who appears for the complainants?

Mr. ELLIS. William P. Ellis and William C. McCulloch.

Comr. MCMANAMY. Who appears for the defendants?

Mr. DEY. Ben C. Dey, for the Central Pacific Railway Company and Southern Pacific Company.

Mr. SPENCER. A. C. Spencer, for the Oregon-Washington Railroad & Navigation Company, The Des Chutes Railroad Company, Oregon Short Line Railroad Company, and Union Pacific Railroad Company.

Mr. PICKARD. Charles A. Hart, for the Spokane, Portland & Seattle Railroad Company, the Oregon Trunk Railway, Oregon Electric Railway Company, Great Northern Railway Company, and Northern Pacific Railway Company.

Comr. MCMANAMY. Who appears for the interveners?

Mr. DUNCAN. Robert M. Duncan, appearing for Harney County, Grant County, Malheur County, Ontario Commercial Club, and Burns Commercial Club.

Mr. THOMPSON. J. M. Thompson and Samuel L. Newton, for (8) the Idaho Public Utilities Commission, interveners.

Comr. MCMANAMY. Are there other appearances?

Mr. CHINNOCK. For the Grants Pass Chamber of Commerce, James T. Chinnock, and J. R. Harvey.

Mr. MCCULLOCH. William C. McCulloch, for the Portland Traffic & Transportation Association, and Mr. Ellis and I also appear for

the Willamette Valley Lumbermen's Association and various other interveners for whom written appearances have been entered. (9.)

H. H. COREY was thereupon produced as a witness on behalf of complainants, and, having been first duly sworn, testified as follows:

Direct examination:

I am a member of the Public Service Commission of Oregon and have so served for about 12 years. Prior to that time I was secretary of the commission for four years. (10.) I have resided within the State of Oregon since 1886. In my capacity as a member of the public service commission I believe I have become to a considerable extent familiar with the transportation system of the State and with the physical and commercial conditions of the State. It is clearly the duty of the public service commission under the statute to concern itself with the transportation needs of the State, and, where found necessary, to present such matters to the Interstate Commerce Commission.

I am familiar with the history of the railroad proceeding a part of which is now before the commission for consideration. I will state the facts and circumstances that brought about the inauguration of the original proceeding of which the present proceeding is an outgrowth.

Formerly the Union Pacific and Southern Pacific were under one management, one control. These by decree of the Supreme Court of the United States were divorced as being contrary to the Sherman anti-trust law. At that time (11) there was a considerable campaign on within the State of Oregon on the part of both the Southern Pacific and the Union Pacific to secure control of the Central Pacific. At that time the Public Service Commission of Oregon conceived the idea of filing a complaint with the Interstate Commerce Commission under the 1920 transportation act seeking joint construction of the uncompleted portion of the Central Pacific between Kirk and Oakridge, that the several defendants be made to construct this particular portion of the Central Pacific jointly, and that it be operated jointly by the various railroads. This would assist us in securing more adequate rail transportation within the State of Oregon. At the time that complaint was filed there was no such line of railroad between Kirk and Oakridge, now known as the Natron cut-off, nor was the line completed to Bend—constructed to Burns, Oregon, from Crane, nor was the line completed from Bend to Klamath Falls. All of these were included in the complaint of the public service commission before the Interstate Commerce Commission. This program has been since quite generally carried out upon application by the carriers themselves to the Interstate Commerce Commission for authority to construct the several lines. There remains yet to be completed the line due east and west between Crane, or, rather, a point four and one-half miles west of Crane,

called Harriman, to connect with the Natron cut-off, also a line (12) reaching into Lake View from the north.

Since this complaint, original complaint, was filed, in October, 1922, the narrow gauge line from Lake View south has been standardized, is now a standard gauge line, or practically.

Approximately 181 miles of construction will be necessitated to complete the original project that the commission originally suggested. In a general way this route follows the original survey—the old Harriman survey—made many years ago, and which was partially completed, approximately 130 miles west from Ontario to Crane. This was never completed, owing to the separation of the Union Pacific and Central Pacific, Southern Pacific Company.

I can describe, in a general way, the suggested points of connection with the rail lines on the east and west ends, and, in a general way, the character of country proposed to be traversed. The line now sought to be constructed is practically due east and west, extending west from Crane to a connecting point with the Natron
7 cut-off near Crescent Lake. This is across the high plateau, known sometimes as the desert. This cover an area of perhaps 75 miles square, and it practically a desert. To the north of this, however, are vast stands of (13) timber. We have north of Burns, variously estimated, from seven to ten billion feet of timber, one hundred five billion feet in the vicinity of Bend, between seven and fourteen billion feet of timber north of Lake View to the south of this area described, with hundreds of—two or three hundred billion feet of timber to the west, that is, including the Cascades and the Willamette Valley. In this high plateau, however, there is potential tonnage from the minerals in the Lakes in that locality.

There are also vast areas in Harney County that can be suitable for growing of agricultural products, and grain has been known to be grown to perfection in that locality.

The present route from Harney Valley would be made east over the—Oregon-Washington Railroad & Navigation Company line through Ontario, which is operated by the Oregon-Short Line, I believe, thence north via Huntington to Portland, a very roundabout circuitous route. A line due east and west would shorten this distance immensely, and also allow that district, as well as all western Idaho, access to the Pacific ports by the shortest routes possible. (14.)

Q. What are the particular necessities of the Malheur and Harney sections, as you found them, for rail transportation? That is, what are their real needs?

A. All that territory should be brought in closer contact with the metropolis of Portland and the capitol at Salem. They are rather isolated at this time. There is a vast area in there, something approximately 33,000 square miles which is all at present served only to a small extent by branch lines around the border.

8 Q. What are the essential physical characteristics of the State of Oregon east of the Cascades and west of the Cascades, and what effect does that have on the necessity for interchange of commodities between the east and west sides of the State?

A. The east side is a more arid district, irrigation projects, vast quantities of alfalfa hay is grown and can be grown, while the western part of the State is more of a dairying and farming district. There is need of interchange by the shortest route possible of commodities such as hay and grain for feeding the dairying industries of the coast, while the coast requires a much shorter route for its tonnage eastbound.

Under the existing transportation system the commerce and the general relationships between the east and west sides of the State are hampered by reason of the Cascade Mountains, which extends the full length of the State, and difficulty of (15) construction, of communication by means of railroads or wagon roads over the Cascades. In my judgment, that has to an appreciable extent retarded the natural development of the State of Oregon, to the extent that we have probably the largest area in the United States without any adequate rail transportation. As to what extent the western section of the State of Oregon has suffered by reason of the existing transportation facilities, or lack of facilities, during the past years: Oregon has, in fact, more than one-half of the standing merchantable timber in the United States. The largest portion of this lies west of the Cascade Mountains, and the larger portion of it is south and west from Eugene. This tonnage to-day must move north to Portland, thence east via the Union Pacific, Great Northern, Northern Pacific, or Milwaukee, or south, as the bulk of it does move, as far south as Roseville, California, before this lumber actually starts on its eastern journey. In reaching Roseville it passes the Cascade Range twice at considerable elevation.

9 A route directly east will avoid this and make a much shorter route by connection with the Natron cut-off at Crescent Lake—shorten the distance over the Roseville route (16) some 420 miles to all points east of Granger, Wyoming.

Q. To what extent has this condition of circuitous haul affected the development of the lumber industry in western Oregon?

A. Well, notwithstanding the large timber area we possess we have relatively small production, no large mills established on any single-line railroad. The large mills are always established where there is more than one railroad to serve the industry, such as at Bend, or on tidewater where they have both rail and boat transportation.

I do not believe there are any large sawmills in western Oregon at the present time operating at points served exclusively by the Southern Pacific Company. The large mills located in western Oregon at the present time are at Portland, Coos Bay, and I believe

there is a large mill at Wheeler. There is also a large mill at Springfield.

As to what extent western Oregon has during the past years (17) suffered from car shortage, car shortage was general for many years up until the construction of the Natron cut-off. It was an annual event.

Q. Over how long a period of time would you say this general car-shortage situation existed, to your knowledge?

A. General car shortage was one of the prime reasons for the adoption by the legislature of the transportation act of this State along in 1907, but there had been car shortage prior to that time, and a car shortage annually, practically annually, sometimes to a considerable number, sometimes as high as 2,000, the records of the public service commission will show; that was annual up until the last few years, since which time we have not been confronted with car shortages.

10 I can state what fundamental transportation conditions contributed largely to that car shortage. Oregon being situated to the extreme western terminals of the various lines of railroad, all western Oregon being served, practically everything west and south of Portland and Astoria, by the Southern Pacific, the Southern Pacific has found difficulty in supplying empty cars, inasmuch as they had to be transported over the Siskiyou Mountains. California, producing many of the same commodities as Oregon, usually had first opportunity at the empty cars.

In Central Oregon there are large lumber mills (18) at Bend and Klamath Falls. Both of those points are competitive points. Bend is served by the Union Pacific and the so-called Hill lines, that is, the Great Northern and Northern Pacific. Klamath Falls is served by the Great Northern and the Southern Pacific. The city of Portland is served by the Southern Pacific, the Union Pacific, the Great Northern, and the Northern Pacific.

My investigation of this matter disclosed that there was urgent public need for additional rail transportation facilities. Concerning the location of the proposed route with reference to port facilities on the Pacific coast, the proposed route will shorten the distance from all western Idaho and central and eastern Oregon to all coast points. A direct line east and west would, if continued to the coast, afford terminal rates to the coast ports the same as Portland and Astoria now receive. That would not be true if the extension terminated near Crescent Lake, that would involve a two-line haul. (19.)

I am somewhat familiar with what agricultural development is taking place in Malheur County at the present time. I know of irrigation projects being put in there by the Government. The irrigation projects recently authorized by the Federal Government and now being financed to many millions of dollars to

11 bring (20) more of Malheur County under irrigation. That

is the Owyhee project and the Warm Springs project. I don't know what the total cost will be to the Reclamation Service of those projects. It runs up into many millions. I understand it is approximately twenty-three million dollars, the Government's estimate, With these projects going in in Malheur County, their natural markets lie on the Pacific coast. The cross-State line that we are asking for will have the effect in the development of that area of shortening the distance materially. (21.)

Cross-examination:

In my description of the railroad routes now available from western Oregon I mentioned the route through Portland, to the north, and through Roseville, California, toward the south. I am aware that the Central Pacific Railway Company, allied with the Southern Pacific Company, is building a new line, a new route, from Klamath Falls east through Alturas, California, to a connection with the Central Pacific in Nevada. And that some large investment has already been made over that route through the standardizing of the Nevada-California-Oregon line, and toward the construction of the remaining mileage between Klamath Falls and Alturas. That will improve the situation, in my opinion. As to whether that would be a very substantial improvement in the situation against which we complain: It will avoid the haul from Klamath over the Cascade Mountains into California and to Roseville, and this line will shorten the distance considerably by the way of Alturas.

I said that there were no large mills located on the Southern Pacific lines in western (22) Oregon outside of Portland except at points where they have competition of carriers, either rail or water or two-rail lines. I had in mind the Booth-Kelly Lumber
12 Company at Springfield. That is served exclusively by the Southern Pacific, except that I understand that the Oregon Electric serves it to some extent, and they ship some lumber out over it. The Oregon Electric doesn't reach the yard. The Oregon Electric doesn't extend south of Eugene. The Booth-Kelly Lumber Company was established many years before the Oregon Electric was built in the Willamette Valley. I do not wish to have you infer from my testimony that the mills at Klamath Falls have been located there because of competitive rail service at that point, prior to the construction of the Great Northern to Klamath Falls, but those are not large mills. I think perhaps all of the mills at Klamath Falls (23) are mills that were constructed prior to the entry of the northern lines into the Klamath Basin. There may have been one or so constructed since. For example the Weyerhaeusers have announced that they will put up what they call a large mill—it has been announced by the Weyerhaeuser Timber Company that they will build a large mill at Klamath Falls. I would not say that the Pelican Bay Lumber Company and the Iwauna Box Company and the Big Lakes Box Company are large mills in the sense in which you speak

of a large sawmill to-day, like the large mill up at Lewiston and the one contemplated by the Weyerhaeusers at Klamath Falls, and the one up at Everett, Washington, or even the mills at Bend, Oregon.

Q. Do you expect, Mr. Corey, in the future to see any more large mills built at points in western Oregon that are not on tidewater, regardless of the amounts of rail service which may be afforded?

A. I think so; yes. I don't see how we are going to market our lumber without.

As to where in my opinion any such large mills would be developed, I can't conceive of logging the timber from the west (24) slopes of the Cascade Mountains to the coast for manufacture. I am not particularly aware that a large portion of the logs sold on the Willamette market at Portland are now brought in from
13 considerable distances by rail. I know they are not hauling any logs by rail over the Southern Pacific's main line into Portland. I am not particularly familiar with the Eastern & Western Lumber Company's logging operations out on the Molalla, in Clackamas County. I just know that it is in existence. The Southern Pacific Company's Tillamook branch goes to the summit to obtain logs for the tidewater mills. From the summit they can go east and west. In other words, they haul from the summit of the coast range toward the mills located on water at Portland, and they haul in the other direction, toward the Pacific Ocean on the west slope of the coast range of mountains. I do not claim to have (25) very definite knowledge as to the present trend of the log movement and log hauls in the State; I have never had occasion to study those. My idea of the main purpose of the construction of the cross-State line is to afford a shorter route on through traffic in both directions, west and east.

Q. Would any carrier be justified, in your opinion, in constructing that mileage, which you say is 181 miles, across central Oregon if it didn't have access into western Oregon, actual physical access into western Oregon?

A. We hope to present a case here that will justify it under the 1920 transportation act.

Q. Well, have you changed your opinion in that regard since the former hearing in this case?

A. We have made different studies which we have prepared to put into the record.

I testified at the last hearing that the requirements of the Union Pacific to build such a line would not be jusified if it were to end at what we then called Odell, and which is now Crescent Lake. (26.) And it had to be maintained by the tonnage on that line only,
14 to be developed along that route. It must have tonnage from the west of the western terminus in order to make it pay, in order to justify the line.

I made the observation that large mills seek rail service in a competitive way, that is, they generally seek a location where competitive rail service may be availed of. It is true that has been my observation with respect to the large mills that have been constructed in the timbered areas of the Pacific Northwest during the past several years. They locate where they can get competitive service. All of these mills whether they are located on the Southern Pacific line, or on the Oregon-Washington Railroad & Navigation Company lines, or on the Spokane, Portland & Seattle line, are afforded joint rates with other railroads. (27.) It is my observation that the mills do not go to them if they can get a location where they can be served by a joint operation like those I referred to.

Q. And it is also your conclusion, I take it, that the great stands of timber to which you refer located south and west of Eugene will be manufactured by large mills?

A. I don't believe I stated by large mills.

Q. Well, you don't think that would be the case, would you—if they locate on a single line of railroad they won't build large mills in that territory, would they?

A. Oh, I anticipate we will have hundreds of small mills all through those mountains.

Q. Well, now, if it is an advantage to have a competitive operation into a manufacturing point, cut this lumber and market and transport it, how will that result be accomplished by taking this cross-State line from Harriman, on the Burns branch, and building it across the desert to the side of the mountain on the east slope of the Cascade at Crescent Lake? Wherein will that construction afford any service to mills on any single railroad line in western Oregon?

A. Well, it is expected that if the line is once completed to connect with the Natron cut-off it will eventually get into the (28) Willamette Valley.

We have prepared routes for its construction into the Willamette Valley. We can justify, we are quite sure, before this hearing is completed, the construction to a connection with the Natron cut-off at Crescent Lake. I am not prepared to put in that part of the testimony at this time. That can be put in by those better qualified than I am.

Q. Well, I am not questioning your motives or your conclusions, you understand, Mr. Corey, but I want to call your attention to the fact that it doesn't reach the timber at all, and you say that competitive operation is essential for this timber. Now, you don't accomplish a competitive operation by stopping the line at Crescent Lake, do you?

A. Not at Crescent Lake; no. There would be no competition between carriers in the Willamette Valley, any more than there is to-day.

Q. Now, suppose this line was built from the Burns branch across to a connection with the Central Pacific at or near Crescent Lake, as you petition for, how will it successfully compete with the Southern Pacific, when the Southern Pacific (29) completes its construction from Klamath Falls to Alturas?

A. They would still be the shorter route.

The mill at Springfield is a large mill for Oregon. It isn't a large mill compared with the large modern mill of to-day. It is as large a mill as there is in western Oregon, except perhaps the mill at Vernonia that is served by the tracks of the Southern Pacific alone. The product of that mill is shipped like the others to the east and to the south.

16 The Southern Pacific line goes as far as Ogden, Utah, with a connection with the Union Pacific Railroad; and it goes south clear through the entire length of the State of California into Mexico.

As to what inducement there would be for anyone connected (30) with the origination of that traffic to take it away from the railroad that is serving the mill with its own track and give it to the Oregon-Washington Railroad & Navigation Company at Crescent Lake: It isn't lumber alone. We must also market our products in western Oregon—take for instance the fruit, broccoil; it must move by the shortest time possible to the markets of the East. We have to come in competition with the same products grown in the Middle West, apples from Michigan and the Ozark Mountains, West Virginia, and so on. Those now move down to Roseville and are turned over at Ogden. It takes a long time in transit. You can answer better than I can why they don't give it to the Oregon-Washington Railroad & Navigation Company in Portland. It is a good deal shorter. I would say it is 700 miles shorter. (31.)

Speaking of the fruits in western Oregon, I think Salem is perhaps the biggest fruit center for the packing and shipping of fruits in western Oregon. And that is only fifty miles south of Portland. Still the products move south, the long haul over the Southern Pacific, despite that the Oregon-Washington Railroad & Navigation Company line at Portland is available and is a much shorter route. And that is a well constructed and efficiently operated railroad. I think it is much better than any you would expect to be built across the center of the State of Oregon for many years.

17 Q. Now, if the Oregon-Washington Railroad & Navigation Company can't get that business now from the Southern Pacific at Salem, how is it going to obtain it from the Southern Pacific at Crescent Lake?

A. Well, the Union Pacific, in my opinion, will eventually enter the Willamette Valley. We must have competition (32), surely. It is the largest area in the United States, I think, or the most productive area, without competition between carriers.

Q. You think if the Oregon-Washington Railroad & Navigation Company was compelled to construct across to a connection at Crescent Lake, that it would then find it necessary to go on the rest of the route to get the traffic; is that it?

A. That territory must be served by more railroad lines. Either the Southern Pacific or Union Pacific, or some line, will have to build more railroads into western Oregon.

Respecting the large reclamation project in southwestern Idaho, the Owyhee and Warm Springs projects that the Government is now developing, I know where this project is located but I haven't been over there since they started construction. That is tributary now to the main line of the Oregon Short Line Railroad Company. (33.) The construction work is carried on and made possible by transportation afforded by the Oregon Short Line Railroad Company from its main line. I think the distance from the stations serving it, say Ontario, is shorter via the Oregon Short Line and the Oregon-Washington Railroad & Navigation Company's present line to Portland than the distance would be if the cross-State line were built. I don't know exactly. Portland isn't the only market for those products. I am not belittling the importance of the Portland market—it is a substantial, important market. If the
18 distance is shorter to Portland via the present operated railroad serving this project, the distance to the Puget Sound cities, Tacoma and Seattle, I think, is shorter. And the distance to Astoria would be shorter, but you will find that those are not (34) the market. The market is in California for those products—is today; probably will be in the future. As to what part of California will furnish the markets for Southern Idaho: There is much moving now into Los Angeles. They have difficulty in reaching the Bay points, however. It is my information that Los Angeles is the important California market for the southern Idaho products; and the obvious reason for that is that the Bay points in California, San Francisco, and Oakland, are furnished by large, productive, fertile valleys in central California that furnish a large volume of traffic.

I am familiar with the so-called Wells cut-off that extends from Rogerson, Idaho, to Wells, Nevada. The figures showing the distances from the Owyhee project to San Francisco via the Rogerson-Wells line and the Southern Pacific and via a cross-State line built and connecting with the Southern Pacific at Crescent Lake will be placed in the record by other witnesses (35) with accuracy. I believe the cross-State is probably the shorter route.

As to where on the Pacific coast in recent years any mill larger than the Booth-Kelly Lumber Company mill, or the Western Lumber Company mill at Westfir, has been constructed in the interior—by interior I mean that territory from which a mill doesn't
19 have contact with tidewater—I believe both the mill at Bend are larger. The new mill at Lewiston, Idaho, is many times larger. Over east of the Cascade Mountains there isn't any

other out except to locate the mills in the timber, but getting over into territory comparable with western Oregon, west of the Cascade Mountains, it is true that the Long Bell Lumber Company and those other big operators are coming out here and locating where they have not only rail service but service by ocean transport. As to whether there is any mill located in this western strip of territory in Oregon and Washington the last few years any (36) larger than these mills located on the Southern Pacific lines in western Oregon, unless there has been tidewater available, I am not posted much on what California and Washington has in the way of sawmills.

The Willamette Valley proper is quite well supplied with rail construction. I didn't say it was too well. There is going to be opportunity to use those lines in the future.

Q. Well, do you think there is need for as much mileage as there is between here and Salem and Albany, for instance, on both sides of the river?

A. Not at the present time, under one operation, owned by one railroad.

Q. What part of western Oregon?—by western Oregon, of course, I mean everything west of the Cascade Mountains—is, in your judgment, in need of any new construction, other than (37) possibly that construction which should be carried on as a part of logging and mill operations and amortized out of the mill and logging projects?

20 A. There are ports that need direct connections with the East. Coos Bay, for instance, would afford one of the shortest routes between Chicago and the Orient, if we had a direct line running east and west from that point.

Q. Well, in addition to the Southern Pacific Company's lines now from Eugene into Coos Bay, at a cost of fourteen or sixteen million dollars?

A. Well, that is a branch line of the Southern Pacific, and any tonnage must now move down via Roseville, rather a circuitous route. It will never develop as a port like Portland or Astoria, Tacoma or Seattle, under present conditions.

Q. Well, it is apparent that you don't understand my question, Mr. Corey. Let me state it again, perhaps a little differently. What part of western Oregon is there, if any, that is entitled or now entitled, in your opinion, to have rails laid into it by a major steam railroad, and which already hasn't such rails?

A. Well, you must bear in mind we are not building the railroads only just for to-day. We are preparing for the future when the demand comes for our lumber, and the lumber in the East, Wisconsin, Minnesota, Michigan, is practically exhausted. (38.) Pine in the South is practically exhausted. There is going to be a demand for our lumber in the very near future, which we will be unable to supply in the time necessary to meet competition from the neighboring States.

Q. Well, still that isn't an answer to my question. Take the map of western Oregon, and is there any part of it which new major railroad construction is now justified?

21 A. There are sections of the west side from which the vast areas of timber is now inaccessible due to the lack of rail construction—take it down in Douglas County, that county in the southwestern part of the State.

Q. Well, the Southern Pacific main line runs right through Douglas County, does it not?

A. Yes; but it doesn't enter the timbered section.

Q. What do you call the timbered section?

A. The western part anywhere—I understand there is about fifty-six billion feet of standing merchantable timber in Douglas County.

Q. Well, you are aware, are you not, that the Southern Pacific Company's Coos Bay branch, which is, I think you will agree, an excellent railroad——

A. It is.

Q. Capable of handling very heavy traffic, runs through the extreme western corner of Douglas County, and wouldn't you (39) say that that is near enough to the timber belt for major railroad construction?

A. It would require many branch lines for logging roads, perhaps.

Q. Yes; and don't you think it is the sensible thing that these various areas or potholes of timber here and there, even though they be expended, should be reached by an inexpensive logging railroad construction, in so far as that is possible?

A. With the least expense possible.

Q. Yes; but have you in mind now any part of this area that we have been talking about that really justifies what we call standard branch line railroad construction, to say nothing of main line?

A. Not right to-day; no.

22 Q. That is right.

A. There is lack of competition of carriers for this entire district.

Mr. DEY. That is all.

Mr. SPENCER. Mr. Dey's inquiry provokes one from me, if I may. You say that you are planning this construction and development for the future. You have in mind that the cut from the southern pine mills will shrink, and that will call for a greatly increased demand of our western fir?

A. Yes.

Q. Is that as I understand you? (40.)

A. That is true.

Q. Now, have you made any estimate as to when actual conditions will arrive wherein the output from the southern pine mills will substantially subside and the demand for our Douglas fir greatly increase? How long will it be, in your opinion?

A. All that testimony is in the previous record, and I am going to have some more in this. They will be importing lumber into certain sections of the South in the very near future. I understand in a small degree it has already begun.

Q. By you yourself wouldn't make an estimate——

A. No.

Q. As to when the construction of the road you are talking about would be required?

A. How is that, please?

Q. I say, you wouldn't make an estimate when this railroad construction would be required to take care of this increased output of Douglas fir?

A. I think it is in the very near future. (41.)

23 Redirect examination:

Other than to shorten the distance somewhat over the present route through Roseville, the proposed or discussed Nevada or California line which has been referred to as the Modoc Northern would not serve Oregon. We are asking for construction of a line or railroad in Oregon. They are offering a substitute by building a line in California. About 17 miles of the mileage of the proposed Modoc Northern will be within the borders of the State of Oregon. That route would be some 200 miles shorter for transcontinental traffic from western Oregon to destinations east of Granger. That route is considerably longer, approximately 200 miles longer, than the proposed route which the commission is suggesting in this case. It would not serve at all the now unserved area of central and eastern Oregon which is mentioned in the complaint of the (42) Commission, nor western Idaho.

From my familiarity with tonnage originating in western Oregon I can say there would be a large volume of eastbound tonnage which might be expected to be routed via the cross-State line and the Natron cut-off of the Southern Pacific. Taking into account the fruit, the fresh fruits and vegetables of western Oregon, it is my belief, from my familiarity with the needs of the producers of those commodities, that they would insist on a direct and short routing of their commodities, and that such traffic would be sent via the cross-State line.

In addition to the connection with the Natron cut-off, other traffic from north and south from Bend and Klamath would be available for routing via the cross-State line. In other words, not only in connection with the tonnage of Western Oregon but all exist-

24 ing central Oregon tonnage producing areas. (43.) It would provide a new and more direct outlet for the lumber of both the Bend and Klamath Falls Territory. This routes as proposed by the commission would be substantially shorter than the routes now traveled from both of those producing areas to the eastern markets; it would be a still shorter route than the Modoc Northern from Klamath Falls to Chicago.

There are several possible routes to connect other areas of western Oregon by direct lines at Crescent or elsewhere on the western terminus of the proposed cross-State line. There is the pass on the Santiam, probably two favorable crossing points in that locality; one across the Cascades to the head of the Rogue River down in Douglas County. Those routes would open up and serve areas now totally unserved (44) by rail lines. In the Santiam Basin there is a substantial area and a substantial quantity of timber now totally unserved by any rail line. They are now extending a line into that territory. This is part of the Oregon Electric. If continued on up the Santiam Pass and through the Hogg Pass, that line could be conveniently connected with the western terminus of the cross-State line, that is, it could connect at Bend.

There are substantial areas of timber in southern Oregon that are not now tapped by rail facilities. (45.) I will describe what large areas of timber particularly there are in western Oregon that are totally untapped by rail facilities: The Southern Pacific has a branch line from Eugene to Coos Bay, but south of that point there is no other branch into the timber of the southwest in Coos, Curry, and Douglas Counties. There are no facilities in Coos, than the line I have just described. And east of the line of the Southern Pacific Company in Jackson and Josephine Counties there are large areas of timber that are totally unserved by rail facilities. And east of Eugene on the McKenzie watershed there is also a large area of timber totally unserved. Convenient routes exist whereby this unserved territory could, by reasonably short extensions, be brought in contact with the western terminus of the proposed cross-State line. (46.) I could hardly concede that the expression "pot holes of timber" is an accurate description of any of Oregon's timber.

I know where the Rogerson-Wells cut-off is located. It connects from Rogerson, Idaho, to Wells, Nevada. It is a part of the Oregon Short Line, Union Pacific system. The length of the cut-off is approximately 100 miles. I know the general character of the territory that it traverses. It is a desert from one end to the other. I can see no difference in principle between the extension by the Union Pacific system to the Southern (47) Pacific of a line of railroad approximately 100 miles long from Rogerson, Idaho, to Wells, Nevada, and the proposed extension of the Union Pacific system to the Southern Pacific from Crane, Oregon, to Crescent Lake, Oregon. I mentioned that if the proposed cross-State line had its western terminus north of Odell or Crescent Lake, it could then be extended across the Santiam Pass, which is an old pass. From Bend westerly across the Santiam Pass until you reach the farming section of the Willamette Valley, I believe it is practically a solid body of timber. I do not know what the mileage through the timber would be that a railroad constructed westerly would penetrate. (48.)

26 Q. Mr. Corey, in connection with this Santiam Pass, or what is known as the Hogg Pass through the Cascade Mountains, wouldn't it be on a more direct line taking Burns as a terminus, wouldn't it be a shorter route using Burns as a terminus to connect with the Prineville Railway at Prineville Junction?

A. A shorter route between what points?

Q. Between Hogg Pass and Burns; isn't that a direct line practically?

A. Practically.

Q. Yes; you say it is?

A. It is.

Q. And from your knowledge of the country wouldn't that route skirt a solid body of pine lumber after leaving the timber on the Cascade Mountains, from Prineville to Burns?

A. That line would be nearer lumber tonnage practically most of the route than the direct cross-State line.

Recross-examination:

Speaking of the availabilty of the Hogg Pass to the cross-State line, if the objective of the cross-State line were the Hogg Pass, I would not (49) have it connect at Crescent Lake but at some point farther north. The Hogg Pass is closer to Bend and Prineville than it is to Crescent. The timber I referred to as being available in the Santiam district, is now being approached by an extension petitioned for by the Oregon Electric, proceeding southerly and easterly from Albany.

Q. And that timber is much more accessible to the Oregon Electric's contemplated line from Albany than it would be to the so-called cross-State line terminating at Crescent; isn't that true? That timber would be much more——

26½ A. The timber in the Santiam district would be much more accessible from Albany; yes.

With reference to the statement that the cross-State line could also obtain business from Bend and from Klamath Falls, there is a rail connection between those points and Bend and Klamath Falls. Bend's principal industry is manufacturing timber. Two of the largest mills in the country (50) are operated there and furnish tonnage; the markets are east. The cross-State line we have prayed for does not touch Bend; it is farther south. The Great Northern operates in connection with its Oregon Trunk into Bend and on its own account south from Bend to Klamath Falls. As to whether I expect that any of that lumber moving to any eastern market the Oregon Trunk or the Great Northern would turn that tonnage, any of it, over to the cross-State line to move, I don't see any reason why some of it would not go over the cross-State line.

27 The Great Northern will probably need all the tonnage it can get down in that country to justify its extended operation from Bend to Klamath Falls. (51.)

Q. You would not, after supporting its application to go into Klamath Falls, suggest that it should be stripped of its tonnage and turn it over to a cross-State line, would you?

A. No; not all of it, surely.

Q. Mr. Corey, is it your thought that the fir timber on the west slope of the Cascade Mountains, in what is called the Santiam region, would furnish lumber traffic for eastbound haul via the cross-State line, should the cross-State line be built?

A. No.

Q. Over the Hogg Pass?

A. No; that was no material point.

Q. What was the point, then, of your testimony showing the amount of timber in the Santiam country? You answered some questions a moment ago to the effect that if the cross-State line should be built through Bend or through Prineville and over what is called the Hogg Pass into the Willamette Valley, that it would pass through heavy stands of timber all the way from Bend or Prineville, or near those points, over into the Willamette Valley; would it get any tonnage from that fir timber?

A. My reply was to the question of the intervenors. Bend and Prineville, who have intervened for a line from Bend to Burns (52) skirting the timber district, then via the Hogg Pass into Albany. My answer did not run to the cross-State line that we are stressing in this case.

Q. Well, you agree, do you not, that that fir timber in that
28 country in that Santiam region would not furnish lumber for any cross-State line, even if a cross-State line was built over that route?

A. Very little that would go over the cross-State line.

Q. The fact is that that timber will not be manufactured into lumber in the territory, but probably will be hauled out in the form of logs to mills at Portland or on tidewater; that is correct, isn't it?

A. Either there or manufactured at Albany.

Q. Well, don't you know, in point of fact, that the lumber manufacturers pretty well refuse to build very large mills now anywhere except on tidewater—the fir lumber mills?

A. That is quite true, but, as I understand it, large areas of the Santiam timber are owned by officials of the Oregon Electric and Northern lines. I can't conceive of them hauling it to tidewater to have the water competition compete with them with the different markets.

By referring to officials, I mean the timber ownership of L. W. Hill. I don't know any other official of the Great Northern who owns timber in there, unless Long owns some. (53.) I understand he does. I understand Weyerhaeuser has. It is my opinion that their ownership or Hill's ownership is likely to change the situation. They would not haul it down to tidewater and have it manufactured and hauled by boat, when he is interested in transcontinental rail-

roads. He will get the tonnage for the transcontinental railroads, if he can. If it was manufactured at Albany, Albany is seventy odd miles from Portland and Portland is the terminus of these Northern lines and they have the Oregon Electric extending from Portland to Albany; if they got that tonnage eastbound it would move over those routes through Portland. (54.)

29 Q. Now you answer Mr. Spencer as agreeing that the pine tonnage, pine lumber originating on the Bend-Klamath Falls line of the Great Northern will, so far as the Great Northern can control it, be retained the full length of the Great Northern haul. That is reasonable to expect, is it not?

A. It is.

Q. And you would not expect that the tonnage from the Klamath mills coming north on the Great Northern would be turned over to the cross-State line at the point of intersection south of Bend?

A. Not unless they are properly compensated for turning the tonnage over to the cross-State line.

Q. How could they be properly compensated, Mr. Corey? What do you mean by that, some abnormal——

A. In the division of the transcontinental rate for the haul.

Q. Some abnormal division which would give the originating line enough to compensate it for the loss of the long haul; is that the idea? You mean that the Great Northern for its haul from Klamath Falls, a hundred miles or so, up to the intersection, might get so much for that haul that it would be willing to give up the haul of that lumber all the way east to Chicago, for example?

A. I never anticipated a great movement in that direction (55) in any event.

The two mills at Bend are now adequately served by the Oregon Trunk and Union Pacific lines, and unless there is some necessity for prompt movement or shorter routing, there is no necessity for another line.

They are not here complaining of the circuitous route over
30 which their cuttings must move.

Q. I understand you, Mr. Corey, to say that you would not expect the Great Northern to turn over, at Crescent Lake, to the cross-State line, the business moving out of Klamath Falls, nor would you expect the business which it originates at Bend to be moved by the Great Northern down south to Crescent Lake and then turned over to the cross-State line, and I assume, under the same principle and for the same reasons you would not expect the Southern Pacific Company to turn over to the cross-State line the traffic which it originates upon its lines either in the Klamath Falls Basin, in the Klamath Basin, or elsewhere?

A. Not unless it was adequately compensated for doing so. I haven't been over the Rogerson-Wells line. I have been to both ends of it. There are 94 to 95 miles in between those ends. I understand there are some minerals in there, but don't know whether they are

operating or not. I know nothing of the so-called Galena mine at Contact; nor the Galena mine operated by John Gray. (57.) I know, however, the mineral resources on the lakes in this so-called desert where we are trying to have this road constructed will produce at least as much or more tonnage than the resources that you have just mentioned.

Redirect examination:

I understand in handling lumber to the eastern destinations, Omaha, Chicago, and east, from the Willamette Valley either via the Roseville gateway and Ogden and east, or via the Portland gateway and the Union Pacific and east, the rates are blanketed. If the traffic from the Willamette Valley, lumber traffic originated by the Southern Pacific moves via Portland gateway, the Southern
31 Pacific handles it only to Portland. (58.) And from Portland it goes over the Union Pacific or one of the Hill lines. I am aware that joint rates on lumber originated by the Southern Pacific in the Willamette Valley exist via Portland to eastern destinations on the same basis as exist via Roseville and Ogden to the east. Also, that there are joint rates on lumber originating in the Willamette Valley via Portland in connection with the Great Northern and Northern Pacific to many destinations in North Dakota, Minnesota, and Wisconsin. In the instances mentioned of movement of lumber beyond Portland, either in connection with the Union Pacific system lines or the Northern Pacific or Great Northern, there is involved in every instance at least a two-line haul.

Q. Would there be any more involved than that where the Southern Pacific originates lumber in the valley and turns it over at Portland to the Union Pacific, or the Great Northern or the Northern Pacific, for further transportation east on joint rates, and joint rates on Bend lumber or Klamath Falls lumber under which the Great Northern or Southern Pacific (59) originating the lumber would turn it over to the Union Pacific at the junction with the Cross-State line for transportation east?

A. I can see no difference.

Exam. ROGER. Mr. Corey, you have mentioned 181 miles in the first part of your testimony. Does that cover the distance from Crane or Harriman over to Crescent Lake only?

A. Yes.

Mr. SPENCER. 185 miles is the figure.

Exam. ROGERS. What, Mr. Spencer?

Mr. SPENCER. 185 miles I think is the correct distance, ac-
32 cording to our engineer. I did not understand that the line, rather the extension from Lakeview, was involved in this proceeding. We know for a fact that a mill would not locate on a point served by one line only as compared with a point served by more than one line, usually on account of the supply of cars. Another reason is that a mill wants every market available. Two lines make

more markets available (60) if one serves the northern part of the United States and the other one the southern part of the United States, as we have in this instance. Take all the transcontinental lines, Union Pacific, Great Northern, Northern Pacific, Milwaukee. The Southern Pacific serves the southern part. As for any other reasons than the car shortage and wider markets, I don't know. The sawmill men could answer that better than I can. We have had no car shortage since the operation of the Natron cut-off was commenced, about two or three years ago—two years ago. When we had car shortage, we were short of all kinds of cars. (61.) We would have difficulty in getting fruit cars in here; at times we would be hundreds of fruit cars short; over two thousand cars shortage for several days for lumber, for the routing of lumber and other things. The Natron cut-off has not cured that situation, but it has facilitated in bringing empties northbound. Prior to the construction of the Natron cut-off, the Siskiyous was a sort of a neck of the bottle. They could not get through the old Siskiyous where it required several locomotives to move a freight train, where the freight train had to be broken up and hauled over piecemeal. That created a congestion of empties south of the Siskiyous and loads north. We have had car shortages simultaneously in the Willamette Valley and east of the Cascades. The car shortage west of the Cascades is causing the
33 most trouble. It is pretty hard to say what percentage. Two-thirds I should say offhand. (62.) We have had a shortage of several hundred cars on the Southern Pacific when the Union Pacific had an excess of that many. At present those conditions are being taken care of by the transportation act and the emergency powers of the commission.

The cross-State line would assist in the matter of car shortage by shortening the haul. Freight moves slowly and this would possibly shorten the trip of the car and of the load to the Middle West and return two weeks. If we assume that the Union Pacific was to build the extension from Harriman to Crescent Lake and the Union Pacific did not extend over into the Willamette Valley, a shortage of cars could be avoided by a means of joint rates through Crescent Lake between the two lines, such as would facilitate the movement of both loads and empties through that point. In that case the traffic would originate on the Southern Pacific and Union Pacific. (63.) I believe that the Union Pacific would bring in the empties to load on the Southern Pacific, inasmuch, as they would get the tonnage eastbound, just as they do at Portland to-day. They furnish cars at Portland for loading at Southern Pacific points occasionally.

Exam. ROGERS. Of what importance do you consider the construction of the cross-State line until some means of access is given into the Willamette Valley?

A. Why, we have built up our case at this time upon interchange at Crescent Lake.

Exam. ROGERS. The interchange between what lines?

A. The Southern Pacific and Union Pacific.

34 Exam. ROGERS. Then that contemplates the building of the extension by the Union Pacific?

A. Yes; that would necessitate a terminal or some method of interchange at Crescent Lake. We would have to have a yard at Crescent (64) Lake or in that vicinity. We just mentioned Crescent Lake as being a larger point; anywhere in that vicinity. Some point on the Natron cut-off. In that instance east bound traffic would originate on some line other than the Union Pacific, be routed over that line to this junction and then over the Union Pacific. The shippers would certainly route their traffic that way; it would be a short route.

Exam. ROGERS. Well then, why don't they route it now by Portland when the Portland route would be shorter than the Roseville route?

A. Well, they are discouraged from doing so. The Southern Pacific wants to hold it to its line, of course. The division——

Exam. ROGERS. Wouldn't they still want to hold it if this cross-State line was built?

A. They will unless they are adequately compensated for giving up this tonnage at Crescent Lake, which we believe we have a record here that will justify it.

Exam. ROGERS. You believe there will be some condition (65) existing if the cross-State line is established that does not exist now with respect to existing routes?

A. We expect to have an interchange, as they have at Ogden at this time.

Exam. ROGERS. Is there any more reason for assuming that that would exist at Crescent Lake than now exists at Portland?

A. Yes.

35 Exam. ROGERS. What are those reasons?

A. Well, we have witnesses coming on later to show all of that. I will state, however, that the costs of hauling the tonnage to-day to Ogden over the Southern Pacific route are such that the Southern Pacific is making little or nothing on that haul and delivering tonnage to the Union Pacific at Ogden. Possibly it would have a greater earning by delivering it at Crescent Lake.

The average haul to Crescent Lake would be greater than the average haul to Portland—not much difference.

Exam. ROGERS. Well, would it follow from that that the same savings to the Southern Pacific could be effected via Portland as apparently at this other point?

A. Well, I would prefer to wait until we have other witnesses who will testify on that point, to have our testimony in proper sequence. (66.)

If the cross-State line stops and connects with the Southern Pacific at Crescent Lake, this will not of itself afford competition to the Willamette Valley. The construction would not of itself

afford competition. However, under the previous decision of the Interstate Commerce Commission in the Southern Pacific-Central Pacific controversy the Interstate Commerce Commission, as we view it, still holds some jurisdiction in that matter. It may reopen the Central Pacific in order to allow common usership over that Natron cut-off into Eugene.

Exam. ROGERS. Do you contemplate some proceeding following this one and as a result of that proceeding, in justifying the cross-State line?

A. I think there probably will be a voluntary application on the part of the carrier itself to get into the Willamette Valley or to the coast.

As to that thought (67) that was the original intention years ago to get into the Willamette Valley and to the coast, into Coos Bay, particularly. There are other ports, however, on the coast,
36 without necessarily going to Coos Bay, which need development and which the Government has spent millions of dollars in developing, not yet adequately served by rail transportation. From the territory involved in the reclamation project, such products as usually are grown on irrigation projects will come. It will grow practically all kinds of farm products grown on irrigation projects. They are even growing a good variety of corn.

In regard to my statement as to the existing rail facilities in the Willamette Valley, the rail facilities, both on what are known as the east and west side lines of the Southern Pacific, are not now, nor have they been, extensively used, but most of the traffic goes via the main line served by the branch line. This is confined to the territory north of Eugene. (68.) Those lines are in the valley, not in the timber. I would expect all traffic to move over a cross-State line if the line was extended on over into the Willamette Valley. The Union Pacific would participate in all traffic west of the Cascades and principally south of Eugene. That includes traffic other than timber. All fruits, broccoli, which moves in many carloads and needs short transportation; developments along the coast; dairy interests. Industry is developing rapidly in Oregon. If existing rail facilities are not used to capacity, the extension of the Union Pacific over into the same territory would stimulate production. That always develops production in every territory, as Washington has been developed. Washington has more transcontinental lines running east and west, three north and south. California has five, Nevada four, Idaho four, Oregon has one east and west and that is down the Columbia River, practically inaccessible except to certain spots; one north and south on the west quarter.
37 I think there would be much additional traffic. (69.) The presence of a cross-State line would stimulate development generally over the entire State. Take Washington, a much younger State than Oregon, by reason of its transportation facilities, it has

developed, surpassed us in population and output of lumber, while we have the greatest amount of standing timber. On the south, California has far surpassed us. Oregon seems to be isolated.

We have figures to show what passenger traffic will move. As to the relative importance of the extension as between traffic originating on the extension and through traffic moving over the extension, it would practically have to be supported by the through traffic, very little along the line. However, we have witnesses to show that the mineral resources of the lakes will afford considerable tonnage, estimated as high as twenty-five carloads a day.

The Government owns (70) about one hundred fifty-six billion feet of timber in these so-called timber areas. There is no certainty as to when that would be marketed; not until we have rail transportation. If they did have rail transportation it would go on rapidly in the near future, due to the depletion of the lumber areas of the East. I don't believe the carriers own any of this timber. The Southern Pacific did own a large body, but no longer.

The bridge traffic that would move over this cross-State line now travels by a rather circuitous route around through Portland, around through Roseville, and western Idaho tonnage goes as far east as Ogden and then back to California points.

When shippers are served by one railroad, they are not exactly their own free moral agents in the privilege of routing their own freight. (71.) Tonnage originating on the Southern Pacific is invariably hauled to market by the Southern Pacific. A very
38 infinitesimal part of it is turned over to connecting carriers at Portland. There are through rates in effect via Portland. The shippers don't use them because they are induced to ship the other way. Under the proper connecting charges, at least at Crescent Lake, the shippers would not be induced to ship the other way if the cross-State line were in existence.

Exam. ROGERS. Now just what do you mean by that? Do you think that the rate via Crescent Lake would be lower than via Portland, we will say, to the same common eastern point?

A. It would not be lower but it would shorten the time to markets, which is the principal element. The time via Portland would be shortened to certain parts of the East. (72.) It would be shortened but no large volume moves in that direction. Your assurance that shippers would exercise their option to route over this cross-State line any more than they now exercise it in routing through Portland lies in the shortening the time in which it will reach the market. For instance, broccoli that has been raised around in Douglas County this last season has gone through Portland on account of shortening the distance—shortening the time in which it will reach the market.

Exam. ROGERS. What about the timber, lumber?

A. The division in the rates is the principal reason that the shipper is influenced to ship over the Southern Pacific lines.

Exam. ROGERS. What does the shipper know about the division of rates?

A. The shipper does not know. But still the shipper has the option as to how he shall route.

Exam. ROGERS. Well, the question of divisions, then, would that furnish any explanation as to why the shipper does not route through Portland as compared with Roseville?

39 A. Only the solicitors of the carriers solicit that business and want to have it originated over its own line.

Exam. ROGERS. Then how would you fix the division by (73) Crescent Lake in order that the solicitation of traffic would go via that route instead of the other route?

Mr. ELLIS. We have another witness who will go into that quite thoroughly in detail, Mr. Examiner.

Exam. ROGERS. Well, if Mr. Corey does not know he may say so.

The WITNESS. I prefer to leave it to the witness who is better qualified to answer than I am along that line.

In stating that the Great Northern could not be expected to give its Klamath Falls business to the cross-State line, we expected the Union Pacific to build the cross-State line being in that territory and having made the original survey. If the Southern Pacific built the cross-State line, the result would be perfectly agreeable to the public service commission; all the carriers are made defendants in the matter. (74.) I don't believe it would create any change in the existing routing arrangement via Roseville and these other points, if the Southern Pacific built the extension. I think it would have the interchange at Harriman or Crane instead of at Crescent Lake. I think the traffic would move over to Harriman with proper encouragement. I think either the Union Pacific or Southern Pacific would be the logical lines to build it. The Hill line would necessarily have a backhaul if it would want to haul onto its own transcontinental lines, to connect with the line south from Bend and then north to their transcontinental lines. It has no outlet east. I am speaking of the tonnage that originated in that locality. It would have on that that is on the cross-State line. (75.)

Mr. HART. I am not going to ask any questions. I was going to ask whether or not, in view of the answers just given, it is not now clear that there is no demand in this case that the Great

40 Northern or the Oregon Trunk build this cross-State line, or any part thereof, as a supposed extension of its lines.

Mr. ELLIS. I would not want to stipulate that. I think the complaint should stand until we hear the evidence in the case.

Mr. HART. The complaint does not make clear what purpose there was in joining the Great Northern, Northern Pacific, Oregon Trunk, Oregon Electric, and others, as parties defendant in the case, and in view of these answers just given by the witness, who speaks, or who gives, as I understand it, the postion of the complainant, in view of these answers I would like to know if it is not now clear that there

is no demand in this case that the lines I have mentioned, or any of them, shall be required, by order of the commission, to build this cross-State line, or any part thereof?

Comr. McMANAMY. Well, Mr. Hart, whom do you expect to answer that question at this time?

Mr. HART. I thought that Mr. Corey would answer that question. (76.)

The WITNESS. I prefer to leave it to the attorneys in the case, upon the completion of the hearing.

Mr. HART. Well, if the commission please——

The WITNESS. Our complaint is that either one or all jointly construct it.

Mr. HART. Does that mean that it would be left to the Interstate Commerce Commission to parcel out the construction? In most of these cases the complainant is required to state his petition. I thought that was what the examiner's questions were designed to bring about. And my suggestion was that we have a more precise statement of the complainant's position.

Mr. ELLIS. The complaint itself states the complainant's position. Mr. Corey has stated his opinion. Now I don't think we can go any further at this time, Mr. Hart.

41 Mr. HART. Well, that is for the commissioner to say. I only make the suggestion.

Comr. McMANAMY. If counsel for the complainant desire to go into that further at this time they may do so.

Mr. HART. I though you might be interested in knowing what the complainant's position was.

Comr. McMANAMY. Mr. Corey, just one question before recess and then we will excuse you. As I have understood your statements, there are two what may be termed important issues involved. One relates to the development of the section of Oregon east of the Cascades by providing railroad transportation (77) through central Oregon the other involves additional railroad facilities for the territory lying west of the Cascades. Now which of those two issues may be considered the major issue in the minds of the Oregon commission as representing the people of Oregon?

A. The greater volume of the traffic would be unquestionably eastbound, affording a shorter haul for the tonnage of western Oregon by this cross-State line; developing central Oregon; also furnishes a shorter route than now exists to Pacific coast points for all western Idaho and central and eastern Oregon.

Comr. McMANAMY. Just one more question. How does the fruit from the Rogue and Umpqua Valleys go, via Portland or via Roseville?

A. Mostly via Roseville.

42 L. E. BEAN was thereupon produced as a witness on behalf of complainants and, having been first duly sworn, testified as follows:

Direct examination:

I am a member of the public service commission of Oregon, and have held that position since January 1, 1927. Prior to my connection with the public service commission I was engaged in practicing law at Eugene for twenty-five years. Prior to becoming a member of the commission I served in official capacity as a member of the legislature for a time, but I don't know why you bring that up. I was speaker of the house of representatives in 1921. (79.) I was born and raised in the State of Oregon. As far as the State and its resources are concerned, I have been in every county in the State, and I think I am quite familiar generally with the State, and to a considerable extent with its transportation system, of course. I was not a member of the commission at the time the original proceeding was brought before the Interstate Commerce Commission for railroad construction. I was a member at the time the complaint now being heard was prepared and filed; that was prepared after I became a member of the commission.

For the purpose of this case I have made an investigation, in a general way, to determine the extent to which the proposed construction is required.

As to the nature of my investigation and what I found the situation to be so far as transportation facilities and requirements are concerned: When I became a member of the commission, or
43 shortly after, there seemed to be a general public demand (80) over the State to bring this case. I naturally got interested in it because of that public demand, believing that it was for the general development of the States. Oregon is one of the older States of the West, admitted to statehood in the latter 50's. Washington, on the north, was admitted much later. Washington and California have developed rapidly, while Oregon has seemed to not go forward, and the general demand over the State on the commission to bring this case now before the Interstate Commerce Commission caused me to look into the matter and wonder why. Oregon's resources are undoubtedly the equal, if not far greater than Washington; has more farming land. Oregon is peculiarly situated. You take from the north we have a range of mountains ranging to five thousand feet and upwards, running the entire length of the State to the Klamath River, the border line, to the California line, practically. Then we have another range of mountains running south, commencing between the Columbia River and the coast, and extending south following the coast line to the California line. The Cascade Range of mountains is unbroken. The Coast Range is broken only in two places: the Umpqua and the Rogue River cut through. The Coast Range of mountains is almost a solid belt of timber. There are here and there old burnings that the hillsides are depleted, but, generally speaking, it is a solid body of virgin fir timber running from the north clear (81) through to the south, to the California line, and that is true, also, of the Cascade Range of Mountains. The west

slope of the Cascade Range is virtually a solid body of virgin
44 fir timber. The east slope of the Cascade is fine timber, and almost a solid body of timber extends from north to south.

Lying between these two ranges of mountains is the Willamette Valley, commencing at Portland and extending south to Cottage Grove, a distance of 145 or 150 miles, probably 30 to 35 miles in average width, capable of producing unknown quantities of the products raised in this altitude.

Then we have the Umpqua Valley, lying south, and then the Rogue River Valley, south of that, and extending to Ashland, or almost to the California line.

West of the Cascade Range of mountains, lying at the sea level altitude, is a grass and dairy country where the grass is green the year around and never dries up. That country is—take it from, you might say, all the way from Seaside to the California line is hardly developed. There are spots like in the Tillamook country, there has been a considerable development, where there is a great quantity of cheese produced and dairying products. Then there is very little development from thereon through to Coos County, and around Coos Bay, Myrtle Point, Coquille, is a very fine (82) settlement and considerably developed, and that is about the extent of the expensive development of the entire coast country.

Now, the people of the coast country and the people of the Willamette Valley and the Rogue River and the Umpqua Valleys feel, from the expressions that I get, that the country hasn't developed as it should develop, and that the reason of that development
45 is lack of rail transportation, and they cite us to Washington on the north and California on the south. You take Oregon from the Columbia River Gorge south, and extending on down to Roseville in California, there isn't a single line of rail transportation east, a distance of some six or seven hundred miles.

Now, the Public Service Commission of Oregon feel that in order to develop Oregon there is call for an east and west line at some point near the central part of Oregon, and when you look at the map that great empire lying east of the mountains, with practically no development, certainly calls for a railroad, that is the public service commission's feeling, so, the case having been before the commission before, the complaint was filed on the basis of the old Harriman survey. In 1905, or about that time, the Southern Pacific and the Union Pacific were under the control of one management in Mr. Harriman's time. As I recall the history of it, Mr. Harriman laid out a plan of development for Oregon and (83) commenced and surveyed the line that is now the Natron cut-off, surveyed the line up the Deschutes towards Bend, and to connect with the line called now the Natron cut-off. He surveyed another line up the Malheur Canyon from Ontario Junction, running west.

The construction work was commenced on those lines. It was built as far as Kirk, from Weed through Klamath Falls into Kirk.

Construction was started on the Natron end from Natron, and built to Oakridge. Construction work was started at Ontario Junction and built up the Malheur Canyon and that big plateau now sometimes called the desert. There was also construction started
46 at the Deschutes River, and a line extended up the Deschutes to Bend. About that time, in 1912 or along about that time, the matter got into court, and there was a dissolution of the Southern Pacific and Union Pacific and this work all stopped—there was a dead end at Kirk, there was a dead end at Oakridge, a dead end at Bend, a dead end at Harriman, or Crane. Many millions of dollars expended and left uncompleted, and it was unfortunate for Oregon that the dissolution was brought about, stopped that work for many, many years. It has all been completed now, through the efforts of the Oregon Public Service Commission and on voluntary action by the carriers. The Natron cut-off is completed, the line from Bend to Klamath Falls—to a connection with the Natron cut-off and a common user into (80) Klamath Falls is completed. There remains only to complete the old Harriman survey the building of some hundred and eighty odd miles from Harriman to Odell, or Crescent Junction.

We believe that Oregon is entitled to develop, and we feel sure that it can not develop without further rail transportation, and this is the first step in the general development for Oregon.

As to how the transportation system of Oregon compares with the system serving the States to the north and the south: I am not familiar with the systems of railroad either on the north or on the south further than in a general way. Washington has four lines east, as I understand it, transcontinental; California has four or five, while Oregon has one, and that skirts the northern boundary of the State.

47 As to what precise needs, or transportation needs, I found in the various communities of western Oregon that I have visited since this case was instituted: It would be a long, long story to tell all the needs of the different communities and sections of Oregon. I could only touch it in a general way. Concerning some of the more important needs that were impressed on me in my study of the situation: If we take the timber of western Oregon, a hundred and eighty odd billion feet or more, variously estimated, the principal part of that timber (85) is ripe timber. Oregon carries 494 billion feet of standing merchantable timber, according to the best estimates we can get through the Government figures. Washington, on the other hand, has a little over 300 billion feet. Washington is cutting and shipping and getting to market between six and seven billion feet a year. Oregon, on the other hand, with the greater amount of timber, a little over—between three and four billion feet a year.

Now, Oregon's timber is just as good as Washington's timber; it is just as close to the consuming markets as Washington's timber;

it is ripe timber, almost—over 130 billion feet in forest reserves, belongs to the Federal Government, much of which is over-ripe. One of the great needs is for rail transportation east over a short route to get that timber into the market where it is wanted. (86.)

As to what the principal need is from the standpoint of the agricultural development of western Oregon: In all fruit industry, the Willamette Valley, the Rogue River Valley, and the Umpqua Valley are capable of producing a great quantity of fruits.

48 We do produce a good deal of fruit. Take it through the Umpqua Valley and the Willamette Valley around Eugene, around Salem, around Roseburg, a great quantity of prunes are produced. I don't know the facts, but I am told by the producers of those prunes that it is impossible to ship prunes to the markets of Chicago and New York and large cities that would consume them, consequently those prunes are dried, don't bring the revenue to the producer that he could get if he could ship them fresh. Then strawberries, all classes of fruits of that kind, that we raise in abundance, we are not able to ship them to eastern markets because of the time, the delays. In southern Oregon a great many pears are raised around Medford, a great pear producing country. I don't know the facts as to those. They tell me that the building of this cross-State line, the routing of their pears over that line would be from 20 to 24 hours shorter to the market than they now have. The broccoli growers of Douglas County, I think they ship 700 to a thousand cars a year of broccoli—the same thing as to that. One of the broccoli growers in Roseburg told me last spring that if they continued growing broccoli, unless the way they were shipping (87) it this season as an experiment proved successful, by enclosing each head of broccoli in a sealed oiled paper instead of shipping it in the leaf, they would have to go out of the broccoli business, because their broccoli was deteriorated when it reached the markets.

As to the demands or needs, as I find them, of the western Oregon dairy industry, so far as it may be affected by the proposed construction: Dairy men tell me through the Willamette

49 Valley, through the Coos County section, that the land is becoming too valuable for the growing of hay. They could consume a great quantity of alfalfa hay that would be raised on the east side of the mountain and use their land for pasturage. As to requirements from the standpoint of live stock producers of central and eastern Oregon and southwestern Idaho, they would be given the benefit of two markets where they now have one. If they were shipping their live stock from central-eastern Oregon or southern Idaho, they could ship to Odell Junction, or to connection with the line to Klamath Falls. If the markets in California (San Francisco) were better than in Portland, they could divert their shipments to California. If better in Portland, they could divert their shipments there. I understand they now have one market—Portland. (88.) This live stock originates in central-eastern Oregon and southern Idaho.

I am generally acquainted with the plateau region or territory, sometimes referred to as the high desert, as I have crossed it several times in different ways; I rode the range there seven years, years ago. It is often called a desert but I don't look upon it as a desert. There is a broad expanse of land, probably 75 or hundred miles each way, level, comparatively level. Much of the land grows sagebrush higher than your head; some places sagebrush comes up almost as high as a man sitting on a horse. Much of the land is very fertile and would grow such crops as grow at an altitude of 40 to 46 hundred feet. At the time of the construction of the road up Malheur Canyon, hundreds upon hundreds of homestead settlers took up claims and their deserted cabins still remain. (89.) Upon investigation, you find they had wells of water for domestic use within 16 to 25 feet almost anywhere through that section. Occasionally there would be places where they didn't strike water, but generally speaking there was water underlying that country.
50 That is why I don't class it as a desert. It was the commission's belief in preparing its complaint in order to describe one definite line that the old Harriman survey would best serve the entire State, but the Oregon commission is not particularly bound to that. If there is a better route that will serve the State of Oregon, why, the Oregon Public Service Commission is not unalterably committed to this one line. As to the consideration given the possibility of further extensions at a later date into western Oregon, it is the belief of the Oregon commission that this step is absolutely necessary, and when it is constructed that it (90) will bring everywhere further development, that the carriers themselves will seek the large tonnage that lies west of the mountains, and that it will not only cut through the Cascade Range in one place, but in time through many places.

Cross-examination:

I have lived in western Oregon a long time and have seen this fruit industry develop and attain its present proportion during that period. Through all these years that fruit has moved to eastern consuming markets to some extent. As I understand it, that is the main market for it. The crop of fruits is varied—the main crop of southern Oregon is pears and apples (91); as you come further north, prunes. The prune belt is around Roseburg, the Umpqua Valley, Lane and Douglas County, Linn, Marion and Polk, Hamhill. It is my understanding from prune growers that they don't ship to the best advantage possible because of the additional time it takes to reach the Eastern markets.

In a general way, I have investigated to determine the service maintained by the Oregon-Washington R. R. and Navigation Co. and its connections in the way of fruit service to Missouri River points and Chicago. The service is ship into Portland; ship from
51 Douglas (92) County, from Roseburg, the prunes would come into Portland, be turned over to the Union Pacific and on

through over its line. I understand that every day in the year a fruit block service on the Oregon-Washington Railroad & Navigation Company and its connections is operated through to Omaha and Chicago on practically passenger train time, expedited service. I don't know what the time is but understand you have that service. I assume it is true, as you say, that fruit is assembled at Rieth, which is the terminal near Pendleton. North of Pendleton is the fruit belt of the northern Umatilla in Oregon and Walla Walla County, Wash.

Q. And that is brought down there into that consolidation; and on to the west and north is Yakima Valley, which is the greatest producing fruit valley, perhaps, of any of them out in either of these States; that is true, isn't it?

A. Yes; I am familiar with the valley over there. And they are all concentrated over there and moved in that way. Hood River intervenes and is also taken up there. (93.)

Q. Now, how could you get that kind of service with an isolated line going across the desert areas of central Oregon to Ontario, over the Cascade Mountains, and across the desert, and then through by Malheur Canyon to Ontario?

A. I see no reason why it shouldn't be assembled at Eugene and shot straight east, in place of coming around by Portland.

Q. Oh, you are going to assemble the fruits of western Oregon at Eugene and turn it over to the cross-State line?

A. I don't know what will be done, but I say I see no reason why it couldn't be done there in place of Rieth.

Q. Well, Eugene and western Oregon would produce a comparatively small volume of this fruit tonnage as compared with that that would be available in the consolidation at Rieth, isn't that true?

52 A. Not if they had the same transportation that they have out of Yakima and that country. As to why, since they have available transportation, they don't send through the Oregon-Washington Railroad & Navigation Company, it is on account of the difference in the length of time in getting it to market. I don't know the exact mileage from Eugene to Ontario (94) via Portland and the Columbia River as compared from Eugene to Ontario via your cross-State line, but it is considerable. I understand the question of mileage isn't the only consideration. The character of service and its equipment to serve have a lot to do with it. And where those facilities can be concentrated and the transportation service to be performed can be concentrated, you can do a much better piece of work than you can where you are scattered in three or four different directions. That is what the fruit growers of western Oregon and southern Oregon are complaining of—they don't get the same service. (95.) It is true they do, if it comes through the Portland gateway. They don't claim we treat the western Oregon shipments any differently than the Yakima shipments. They claim that ship-

ping the pears from the Medford district the pears either have to come from Medford to Portland before they start east or they have to go to Roseville before they start east. Now, from Eugene, the fruit shipped from there or any other product has to come to Portland before it turns east, or it goes to Roseville and after it gets to Roseville, it isn't any closer to the market, or very little closer, than it was when it left Eugene. I don't know which way it goes from Eugene. I think the pears go through Roseville and in a manifest train from Roseville east. It is my understanding that the broccoli last year came north. (96.) The prune growers tell me prunes are
53 not shipped green. I am not familiar with the prune. I have neither raised nor shipped them. It is my understanding that they ship prunes green principally from Umatilla County, north of Pendleton, and from southern Idaho. Here in western Oregon, they evaporate them. It may be for the reason that after a few days the Oregon prune becomes afflicted with black rot; I don't know. Around Newberg, 50 miles of Portland, they produce quite a few prunes. That, and around Salem, is one of the large prune-producing districts in the State. (97.) They don't generally ship prunes green throughout the Willamette Valley.

As to the tract where the high sagebush grows, I don't know whether the Government terms it a high desert or not on its maps of central Oregon. I explored all of that territory right west of the Malheur Lake after you get up on the bench, through Wagontire. I stopped at more than a dozen cabins the last time I was over there. The old wells were still there and many filled up. (98.) That was two years ago in October.

Q. Why, do you know Mr. Olsen, the manager of the Pacific Live Stock Corporation, that owns an empire of land, the Miller & Lux interests, around the Harney country and in Grant County?

A. I am not personally acquainted with him. I know who he is.

Q. A. R. Olsen. He testified in this case previously and conducts those ranches over there. Now, on the occasion of the hearing of this previous case, in the month of March, 1924, when he was being interrogated regarding that Central Oregon country, this question was propounded to him: "And yet you drive 250 miles down to Winnemucca to ship, instead of driving to Klamath Falls, which is one of the greatest feed lots there is anywhere, isn't that true? Answer. That is quite correct, but if you would go over that country you would realize that it is absolutely impossible to drive between Crane and Klamath Falls. Question. Why? Answer. That is a
54 great high desert country and has no water; there's no feed facilities. That is a country that you can no longer trail cattle out of in the sense that you graze them as you go along. You must feed everything. There is no feed at the present time between Crane and Odell, and no (99) water." Now, is that the condition through that central Oregon country from Crane to Klamath Falls?

A. I would say that he was absolutely correct.

Q. All right, then we understand each other.

A. It is a dry country. There is no water on the surface, and there is no feed on the surface that you could feed—taking a band of beef cattle, there isn't sufficient grass that they could browse it as you go along, there's no ranch there to raise the hay to feed them, and there is no surface water.

I have never been over the survey between Crane and Crescent Lake; I have been over the wagon road across the country and across it otherwise. There is a wagon road from Bend, from Millicar across to Burns and Millican is one of the two stopping places across from Burns to Bend. (100.) There are two or three where there's people living. I wouldn't say the road skirts the margin of what we call the desert on one side or the Blue Mountains on the other. It is through the general country.

Q. Well, it is away north of this location, isn't it?

A. Well, from Burns—from Burns out for a ways—It is, nearly all the way; yes. As a matter of fact, Oregon has been spending millions and millions of dollars on highways in the last few years. I think something like a hundred million dollars. If you include the counties and road districts, she has spent over two hundred million dollars since 1917. I am talking about country contributions within the State. The State and Federal Governments have been building down the coast here on construction that will run in places
55 a (101) hundred thousand dollars a mile. As to whether during all that time they have spent enough money in central Oregon on roads and highways to maintain a decent school district, I think they have spent a fair proportion of money according to the taxable wealth in eastern Oregon, as compared with western Oregon. As to whether the taxable wealth in this entire area of central Oregon would be entirely insufficient to build this cross-State line, I would say the taxable wealth of it to-day is nil. As to what they have done in that period in the way of roads, in this particular territory there is one highway built from The Dalles to Klamath Falls, called The Dallas-California Highway. It is a gravel macadam road, oiled, a very perfect road. It is about 300 miles, the entire distance. (102.) I am not familiar with the road program but there has been a great deal of money spent east of the mountains. This particular country you speak of from Bend across to Odell, that hasn't been improved entirely. It is improved part of the way out from Bend and part of the way from Burns. It is my understanding that the State highway commission has during the last few years projected and partially built a road from Bend to Burns, but I haven't been over it.

Q. (By Mr. Spencer.) Well, that is located on the old road there that has been there for years, to the extent that it isn't high centers and a trail, isn't that true?

A. Well, I don't know just where they are putting new road, but I assume that it is somewhere near that. Half way across you can't

find it. It is the old cow trail. And when you get south of that down in this great expanse there wasn't a road the last time I was down there. (103.)

56 Q. No; there isn't in that section across the whole expanse for 120 miles a good respectable growth of sagebrush?

A. Well, I wouldn't agree with you on that.

Q. Well, isn't that true? You start 10 miles west from Burns and go down to the margin of Harney Lake, and you have got alkali flat and salt grass for twelve or fifteen miles, haven't you?

A. There is some alkali and salt grass around the lake.

Q. Yes; and the lake is practically dry?

A. But just after you get up from the lake on that plateau and take it through the Wagontire country, and if you have ever been through there, why, you get plenty of sagebrush higher than your head, and you get on a horse and ride through it you will find some high as your belt.

Q. I have been through there. Well, from the Wagontire you go in through a canyon of rock that is of volcanic formation and extremely difficult to move at all, and you encounter that condition for forty or fifty miles along this very location, don't you?

A. Well, I never was right along the location. There is some lava rock there, that is——

Comr. McManamy. Will you put on a witness to put those facts in the record there?

Mr. Spencer. I want to ask him about this high sagebrush. I want to ask him about this question that there is water (104) within twenty feet of the surface of the ground. Have you been to Lake, in Christmas Lake Valley, where the weather bureau is maintained?

A. No; I haven't been.

Q. You haven't been there?

A. No.

Q. And if the average rainfall is between six and seven inches, you wouldn't expect to find very much water, would you?

57 Not on the surface.

Q. Nor underneath, either?

Q. I wouldn't say anything about that.

My headquarters were in Butte Creek Valley, in California, but I rode the range clear over to Harney Lake. I rode the range north (105)—quartering from Lakeview over to Burns. I didn't herd any cattle across but herded some back. We picked up some cattle where Mr. Hanley's Double-O Ranch is now and we drove them back a hundred fifty or two hundred head right across the country you are speaking of. There are no cattle in there now to speak of and haven't been for a great many years, not a great many. I am speaking of south of the Double-O Ranch. It has about a thousand acres of grass land and is the only available water right in that section. (106.)

Referring to statement in regard to shipping alfalfa hay, a dairyman from Marshfield made the statement that if he could get alfalfa hay at a reasonable rate the grass land would be devoted to pasturage if they could ship in their hay. I think he will be here and you can examine him. I would say the Marshfield country, the Coos Bay country and the Tillamook country are the larger consumers of hay. It is the largest development in dairying in those two counties in western Oregon. I mean largest in the matter of intensive development. (107.) Not the largest in area but the best development. I think the largest herds of dairy cattle are in Tillamook and Coos. There are dairy herds all along the coast. As to how the production of alfalfa hay in western Oregon has progressed in the last four or five years: In a general way I know they have developed a dry-land alfalfa that is unirrigated to some extent. Whether it is a success I don't know.

Q. And they can produce alfalfa hay in western Oregon and are doing it to the extent now of some seventeen or eighteen thousand acres, more cheaply than they can raise it in eastern Oregon and ship it in?

A. Well, I don't know as to that. I don't know of any such development.

58 Q. You gentlemen cut the rates on our alfalfa hay shipments from eastern Oregon in here. Do you know, as a matter of fact, that they have produced any volume of shipments since those rates were reduced?

A. I don't know as to that. I don't know the records (108)—— I don't think that hay shipments will go very far towards sustaining a cross-State line. If they were shipping a great quantity of alfalfa hay to Coos County, the dairymen who take to shipping their hay in and using their lands for pasturage would bring in a good many loads of hay and furnish empty cars to take back. (109.) As to whether they have a great volume of hay in the Klamath Falls country to ship out: I think they are pulling their alfalfa land out of alfalfa and devoting it to potatoes. I have heard it said that they found it more profitable to raise potatoes than hay, even if there is a great demand for alfalfa hay in western Oregon. I assume that they could get alfalfa hay at Marshfield and Astoria by boat from San Francisco, if they want it. I am not sure of that.

Q. And western Oregon produces several hundred thousand tons more hay than it can consume every year, isn't that true?

A. I don't know.

Q. You don't know much about that?

A. I don't know what it produces and its consumption. (110.)

Q. (By Mr. Dey.) I suppose, Mr. Bean, we could agree that the traffic to be produced locally under the most favorable circumstances along this proposed cross-State line would never in itself justify the construction of the line?

A. No; I would agree with you on that.

Q. You would?

A. That locally within itself it probably isn't capable, under present conditions at least, to produce traffic enough to justify
59 the building of the line.

Exam. ROGERS. You wouldn't say, though, that it would never be?

A. No; I don't agree to that. I say that under present conditions. What may come in the future, I don't know.

Comr. MCMANAMY. What do you mean by "present conditions"?

Exam. ROGERS. As far as you can see now?

A. As far as I can see now, reasonably.

Comr. MCMANAMY. Will you describe what you mean by present conditions?

A. Well, the present conditions, the value of farm products, and the present conditions of that country; there is no apparent available supply of water for irrigation purposes. Therefore, under present conditions, there would be no production right now. It is essentially a stock country. (111.) There is some grass and it is capable of producing some stock. I would say the line, then, if built, must look for its support principally to what we will call the through traffic.

Q. Now, will you tell us, just briefly, what the theory of the State commission is with respect to where that traffic is coming from and how it is proposed to get it onto the cross-State line if the cross-State line were built?

A. Well, I don't know whether you want me to go into that or not. I don't know just how far you want me to go into that. Just what do you have in mind, now?

Q. Well, the through traffic upon which we are to rely to support this is to come from where?

A. It will come largely from western Oregon, western and
60 southern Oregon. Under present conditions, practically all of it originates on Southern Pacific lines. I am aware that the Southern Pacific is starting on the construction of the so-called Alturas route from Klamath Falls to Wendel. (112.)

Q. And you are relying upon this same traffic; and you, of course, are more or less familiar with the Klamath Basin case, which we tried here a year or two ago—three years ago?

A. In a general way.

Q. And it is a fact, is it not, that the Southern Pacific Co. will rely on this same through traffic to support the investment which it is now making, a very large investment, in the Alturas line?

A. Yes; naturally they will. They will naturally rely to a considerable extent on the western Oregon tonnage for that traffic; that is true.

Q. Now, your associate, Mr. Corey, testified considerably about the exchange of traffic at Crescent Lake. Do you know why it is that no mention is suggested of any exchange of traffic with the Great

Northern at the point where the cross-State line must cross the Great Northern line before it reaches Crescent Lake?

A. I don't get your question there.

Q. Well, you are familiar, of course, with the new line that the Great Northern has just finished, or two or three months ago finished, from Bend down to a station called Chemault?

A. Yes. (113.)

Q. On the Cascade line?

A. Yes.

Q. That station of Chemault is south of Crescent Lake?

A. That is correct.

Q. Therefore, your cross-State line must cross the Great Northern before it reaches the Southern Pacific?

61 A. It crosses north about 18 miles.

Q. Yes; now, is it the intention—is it expected by the complainant here that any of the traffic which the Great Northern originates in Klamath Falls, or which it originates at Bend, will be diverted to the cross-State line?

A. I will answer that as Mr. Corey answered it—we will have a witness on the stand on that question. It is our expectation that we will be able to show in this case that the tonnage from western Oregon can be delivered to whoever builds the cross-State line at a point of that junction under a joint rate that will be more advantageous to the Southern Pacific than it is now getting out of the long haul by Roseville to Ogden.

Q. How about the eleven or twelve thousand cars a year that originate at Bend? Would the same thing apply to that traffic?

A. No; I wouldn't say so. Bend is a considerable distance north, on two lines of railroad, the O. W. R. & N. and the Northern lines, manufacturing a product that is going into definite (114) markets. There probably wouldn't be the same occasion to exchange the traffic there.

Exam. ROGERS. What markets do you have in mind that there wouldn't be any occasion for exchanging traffic with the cross-State line from Bend if it is necessary from the other points?

A. Well, I was speaking of the tonnage on the western side of the mountains. It goes over the Natron cut-off, originates in Southern Pacific territory.

Exam. ROGERS. Going to where?

A. Going to Ogden, or Granger, and east. We think that

62 traffic can be exchanged at Crescent Lake, or at the connection point there with whatever line builds this cross-State line, to the advantage of the Southern Pacific and in the interest of the line, the carrier, that builds the line. Now, I don't want to go into that, I am not capable to testify on the details of that. You asked me a question. I say the commission has that in mind and will have a witness here on that question.

As to the traffic originating at Bend, I think possibly some of it might go across the cross-State line, going to Ogden. Depends somewhat on the shipper, if the shipper wanted to ship lumber into that territory. (115.)

Q. (By Mr. DEY.) How about the business handled by the Oregon Electric, which is jointly owned by the Northern Pacific and Great Northern and extends from Portland to Eugene, when you get over into the Willamette Valley, or almost at the head of the Willamette Valley at Eugene, and the Northern lines through the Oregon Electric compete very intensively now for the business of the valley? Would any of the business originated by the Oregon Electric be expected to move over the cross-State line?

A. Well, now, you say the Oregon Electric competing very closely with the Southern Pacific. Now, I don't want to answer that question with that assumption. I don't think the Oregon Electric is competing at all with the Southern Pacific, as far as any sharp competition is concerned, and it is going to have to develop, the Oregon Electric, before it gets out of the red. It isn't doing any business in the Willamette Valley; it isn't capable of doing any business. Its roadbed is not in shape to do any business. We expect it to be developed some time.

I haven't any definite information as to how much business it is doing. I know in a general way, because I travel over it once in awhile. I know the condition of its roadbed.

63 What I would like to see if you would leave it to me, would be an order of this commission to require the Southern Pacific and Union Pacific and the Northern lines to jointly build this road and operate it as a bridge. What I want is for some of you people to build that line and let Oregon develop, and I would like to have all of you join in.

Q. I am glad to have that clarified a little. I gathered the impression that there was little if any disposition to require these Northern lines to join in the construction, and there has been no intimation of taking any business away from them at their junction point, on the large amount of traffic which they originate at Klamath Falls and at Bend.

Mr. DEARMOND. May I ask a question? Mr. Bean, you stated, in answer to Mr. Dey, I think, that your proposed line would depend altogether on through traffic to justify its building.

A. On what? Through traffic?

Q. Through traffic. (117.)

A. I said materially. That is—I didn't put it that way. There wasn't enough tonnage available to this line from the territory itself to justify the expenditure of money for merely that tonnage.

Q. Now, your commission isn't committed exclusively to this one route?

A. No; we are committed to this extent, that in filing the complaint we followed the old survey of the Harriman régime.

Q. Well, suppose you shifted farther north and made your western junction at a point at Bend, and skirted the southerly part of the mountains to Burns and came westerly across the Santiam Pass, you would have local tonnage, wouldn't you?

A. Yes.

Q. An immense amount of it, isn't there? There is a large
64 amount of timber in the Blue Mountain territory?

A. Yes; by running feeder lines into the Blue Mountains and reaching that timber. I have been in Prineville and on Crooked River.

Q. Would it be possible to get across that Crooked River canyon to the line running south of Crooked River Canyon as proposed?

A. You are referring to feeder lines from the line Mr. DeArmond (118) referred to into the Blue Mountains?

Q. Yes.

A. Well, I am not sufficiently familiar with that canyon to say that.

Q. There might be some difficulty, don't you think, from your general knowledge?

A. Well, as I said a moment ago, I am not familiar enough with it to make that statement.

Q. In the country you describe as the high desert it is an entirely different country, isn't it, than contiguous to Prineville and Crooked River?

A. Well, there is considerable difference in it; yes. But this territory contiguous to Prineville is a part of this central Oregon empire mentioned in our petition.

Q. From your general knowledge, could there be a very large amount of tonnage developed in that territory from the timber and agricultural and other resources?

A. Are you referring now to a line from Seneca to Prineville?

Q. Yes.

A. On then from Prineville down across over the Santiam Pass?

Q. Yes.

A. Well, there will be considerable tonnage on that line.

65 Q. As a matter of fact, the line which you have proposed
would (119) develop the least tonnage of any possible line through that territory, would it not?

A. Within the territory itself, I would say yes.

Q. Depending on—the main idea being the through traffic from the western part of the State, the main consideration?

A. The thought of the Oregon commission was for an east and west line over the shortest possible route, and that seemed to follow on the Harriman survey, which was made years ago, and we assumed that that would be a foundation to start in this case.

Q. But should it develop that a line could be put across the Cascade Mountains further north to that territory, that that would be feasible, then would it be, considering the local territory across east

of the mountains, much better to go further north, where there would be local tonnage possibly developed?

A. If it should be found that that would better serve Oregon, the public service commission will say amen to it.

Q. And isn't it a fact that some tonnage would be found further north? In fact, a very great deal north?

A. Yes; I am inclined to think there would be more tonnage directly tributary to the line.

Mr. DUNCAN. On that point, Mr. Bean, what effect would such (120) a line have upon through traffic originating in Malheur County, in southern Idaho, destined for northern California markets?

A. Well, it would lengthen the route quite considerably. I don't know the exact distance.

Q. And it wouldn't be as feasible for shippers at that point to ship across the line that you have described from Seneca to Prineville and then south to California as it would across the line that we asked for?

66 A. It would be more circuitous along there. As to whether it would be shorter from those point to Portland by way of Prineville, I haven't checked the map to see. Not much difference, possibly a little shorter.

As to whether it would be an advantage to route traffic more directly to Portland, being the chief port or seaport of the State: The Public service commission represents the entire State, and in framing our complaint, we framed it to what we thought would be the best interests of the State as a whole. (121.)

Q. Would that be to the best interests, to divert traffic to California?

A. The line that—according to the complaint, you mean?

Q. Yes.

A. I am inclined to think it would. It would be the shorter route. I don't know to what extent the shippers route their own traffic. As to why prunes and strawberries can't be shipped to Chicago, I only know what I get from the fruit grower, that the distance, the time consumed; that the prunes don't reach the market in marketable condition. I don't know what period of time they will carry and reach the market in proper condition. (122.) Some of the prune growers claim that if they had the direct route east they could compete with southern Idaho and Yakima Valley and those places in shipping their prunes green into the eastern markets, but I don't know as to the facts.

I don't know what sort of a schedule they are anticipating to make. Shortage of distance, I understand—I don't know the exact distance. The maps will show. Some 400 odd miles closer to Granger

66½ from Eugene than by way of Roseville, but I haven't checked those figures myself.

Exam. ROGERS. What I have in mind, Mr. Bean, that if the present schedule, you say, is seven days, and this four hundred miles would cut off one day, leaving six, and prunes wouldn't carry over five——

A. It wouldn' help them any.

Exam. ROGERS. It wouldn't cure that situation?

A. No.

Exam. ROGERS. Do you think this so-called desert area has sufficient water underlying it to support agricultural development without irrigation?

A. I wouldn't say as a whole, no. There are spots on it, there's places on it, that, depending, of course, on the underflow of the water, if the water is sufficient to stand pumping, there's many thousands of acres of very fertile land (123) that if you had water to put on it that would grow anything that would grow in that altitude.

Exam. ROGERS. Yes; but can you answer the question as to whether there is sufficient water there to support agricultural development?

A. No, no; I can't answer that question. I know there is water along the northern boundaries where the settlers went in the early days, settled; there's cabins scattered there for miles and miles and miles, deserted cabins—all of them had well water—I say all of them; practically all of them. I have visited some of those, and the water you can see in them yet, and some of them have caved in, and the water, I would say, would run within sixteen to forty feet.

Exam. ROGERS. Well does the presence of these old wells indicate a present supply of water?

67 A. For domestic purposes. I don't know how they would stand pumping at all, but the farmers or homesteaders did live there and had water to water their cow and their horse and for their own consumption.

Exam. ROGERS. I didn't quite understand your answer to Mr. Day on the traffic that this cross-State line would enjoy, that is, whether it would ever have enough traffic originating on the line to support the line?

A. Why, that is impossible to answer what the future will bring forth. It is a country that isn't going to develop (124) any great amount of tonnage from agriculture. What there might be there in mining and other matters I don't know, but it isn't an agricultural country. It is a high plateau, 4,000 to 4,500 feet elevation, grows some grass on the foothills, the little hills scattered in, grows bunch grass that would produce some stock.

Exam. ROGERS. Well, is it the agricultural development, or the mines that the territory may hold, or what is it in the way of local traffic that you attribute to the support of this cross-State line?

A. At the present time there is practically nothing. Now, what may develop in the future—I think there would be some stock—I don't know—depends very much on whether there is water underneath that will stand pumping and whether cheap power can be

had to pump it as to whether it will produce any agricultural products to ship out.

Exam. ROGERS. That is the way I understood it awhile ago, Mr. Bean, and it raised this question in my own mind, that I have heard it said, I heard it somewhere, that there was some thirty-three thousand square miles in this territory, or one-third of the area
67½ of the State, that wa swithout a rail line, and, as I got it, considerable importance was being attached to that, and I am wondering now, if there is nothing in sight in this territory to support a rail line, even if put in there, how any point can be made of the fact that there is this vast area without rail transportation? (125.)

A. Well, it will never develop without rail transportation, that's a sure thing.

Exam. ROGERS. But I just understood you to say that it wouldn't develop with it because there wasn't anything there to develop.

A. Well, I didn't mean to say that, if I did: I didn't mean to give you that impression. Much of that land is capable of development. Now, there is much of it I can't see at the present time that it can ever be developed.

Exam. ROGERS. Now, what proportion of this thirty-three thousand square miles that has been talked of would you say would never probably be developed—barring, of course, the——

A. Well, that statement takes into consideration the country into Burns, those big stock ranches of Burns, irrigated areas in that territory, and skirting the foothills of the Blue Mountains and extending to Silver Lake, Chewaucan, Summer Lake, where there is some substantial settlement now. I was testifying to the heart of that, probably seventy-five miles square, or a little larger.

Exam. ROGERS. An area 75 miles square would be about 5,600 square miles out of the 33,000; is that your thought?

68 A. I don't know how it would figure up, but I was (126) testifying to that center in there, not taking in that whole territory. That thirty-three thousand square miles covers that entire country running to Silver Lake, Lakeview, and all of those places, that are now fairly developed.

Exam. ROGERS. Your thought as to the territory that would not probably ever be supporting was confined to this area seventy-five miles each way?

A. Yes; that is the center of it, through which this road runs directly.

Exam. ROGERS. That is all.

Comr. MCMANAMY. That area of thirty-three thousand square miles, then, contains a great deal of land which is not only at present producing traffic, but which will in the future produce——

A. A great deal more.

Comr. MCMANAMY. A great deal more traffic?

A. That is correct.

Comr. McMANAMY. About those deserted homesteads in this section of the country, do you know the cause?

A. Only from talking with the old-timers over there.

Comr. McMANAMY. Well, what I am trying to find out, is it due to lack of transportation, or lack of water, or——

A. Due to lack of transportation. They went in there (127) at the time the road was being built from Ontario Junction to Crane—people thought the road was going to be built across the country, started in on that ground, and they followed that road there
68½ and they took up homesteads all over that section, wherever it looked like there was development for a home, and they stayed there until a time when road construction stopped, and everything stopped, and it is deserted and gone. I don't know what——

Comr. McMANAMY. Do conditions differ in that particular along the part of the line that was completed? That is, have those homesteads developed there and are producing traffic?

A. These homesteads that I refer to are in that territory west—a little south and west of Burns, through the Wagontire section, and extending out seventy-five, eighty miles from Burns. Now, that country, there is—there is no railroad in there. There was no place between Harriman, or Crane, in the Malheur Canyon for a homestead after that left the valley, Ontario, north to a canyon; the road is built right up a canyon all the way, from an elevation of two hundred feet to four thousand feet, and stopped. From there on west is where this settlement is—where this settlement was.

Comr. McMANAMY. This high desert, so-called, is a comparatively level plain? (128.)

A. Comparatively level; yes.

Comr. McMANAMY. There are no valleys or streams in it?

A. No; no streams, or no fertile valleys. It is a dry, arid country.

Comr. McMANAMY. I think that is all, Mr. Bean. Thank you.

Mr. SPENCER. May I ask Mr. Bean another question, please?

Comr. McMANAMY. You may.

69 Mr. SPENCER. I am anxious to know where this thirty-three thousand square miles is located, this great empire that isn't served with rail connection. Now, I assume that it would be fair to figure that fifteen miles on either side of the railroad would be the country that would be tributary to the railroad; would that be about right?

A. Oh, no; I wouldn't limit it to fifteen miles.

Q. Well, put it twenty.

A. You take the territory north of this line to the foothills of the Blue Mountains, there is a territory that can be developed——

Q. Well——

A. And it is tributary to this country.

Comr. McMANAMY. Well, Mr. Bean, along that same line, isn't Harney County, Oregon, tributary to Winnemucca, Nevada?

A. Well, the nearest railroad, in a sense, yes. (129.)

Comr. McMANAMY. The nearest railroad—they drive stock down there, don't they?

A. Yes; in a sense.

Mr. SPENCER. No; the present Burns branch of the Oregon-Washington Railroad & Navigation Company runs right through the Harney Valley, doesn't it?

A. Yes.

Q. To Burns?

A. Yes.

Mr. ELLIS. Runs through and stops.

Mr. SPENCER. Well, it doesn't now.

A. That is true now, but this country is all, you might say, tributary to Burns, and they can drive their stock to Burns, but that doesn't settle——

69½ Exam. ROGERS. Mr. Spencer, that figure of thirty-three thousand was my figure—was that right?

Mr. SPENCER. Yes; that has been the statement all the time. But I want to get this thirty-three thousand. Now, if you are going to have—by settlement you mean—what do you mean? You are going to settle and build this country, now, you are going to build this location across, now, from Harriman to Crescent Lake, 185 miles—now, what kind of settlements are you going to put on there, and what are you going to raise?

A. Mr. Spencer, that isn't from me. I don't know. I know there is land in there of soil that is capable of producing any crops that will be raised in an altitude of forty-five hundred feet. (130–131.)

Q. If you can get water on it.

A. If you can get water on it. And I know there are places in there where the water is within 16 to 40 feet of the surface. Now, what amount of water there is in there, whether it will stand pumping or not, I don't know. If there is water there that will stand pumping it is capable of raising a good bit of alfalfa and other crops. It depends on the future.

Q. Are you proposing here the proposition that a railroad is to be built to induce people to go in there and try to raise alfalfa at the nozzle of a pump?

A. No; I am not advocating that at all. I am saying that if a road is built in there that there will be much of it that will be settled, and if they have water underneath it will be developed and grow crops.

70 Exam. ROGERS. To what extent will the development depend on whether there is sufficient water there to stand pumping or not?

A. Well, it will develop almost entirely on that. I know of no way, can see no way, where they can get water for—surface water for irrigation, by storage or otherwise. There may be. I don't know what that is. (132.)

Mr. SPENCER. Now, getting back to the original inquiry, I want to know what area is comprised in this 33,000 square miles. I want to assume that you can serve a district 15 miles either side of a railroad, or you can make it 20, if you want to—that would be 40 miles in that belt through the State for a distance of 185 miles. That would be, say, somewhere between 5,500 square miles and 6,500 square miles. Now, where is the balance of it?

A. I don't know where the boundary of the 33,000 square miles is. I didn't bound it. I didn't know anything about that. I have seen that used, and the examiner mentioned that a moment ago; but I say that it must include Summer Lake, Christmas Lake, Cycan, and Chewaucan, and Lakeview, that entire country there.

Exam. ROGERS. As I count that, that would be an area about 185 miles square——

Mr. SPENCER. I didn't get that statement, sir.

Exam. ROGERS. I say, that would be about 182 miles square to make up 33,000 square miles.

Mr. ELLIS. The 33,000 square miles figure was used before the construction of the line from Bend south to Klamath Falls. It includes the area west of the terminus of this line. (133.)

71 Mr. SPENCER. Well, even so——

Mr. DEY. Have you got a witness to come on later who will tell us just where the 33,000 square miles was, or is?

Mr. ELLIS. I don't know as we will have anything to say about the 33,000 square miles in this case.

Mr. SPENCER. All right.

Mr. ELLIS. That was the last case, Mr. Spencer, where we used that. It is somewhat different now.

Mr. DEY. There is some contraction since that.

Comr. MCMANAMY. You will find that 33,000 square miles on page 13 of 111 I. C. C., in the commission's former report.

Mr. SPENCER. It went on the shelf, I think, Mr. Commissioner. (134.)

WILLIAM L. TEUTSCH was thereupon produced as a witness on behalf of complainants and, having been duly sworn, testified as follows:

Direct examination:

I reside at Corvallis, Oregon; my occupation is Assistant State Leader of County Agricultural Agents, representing the Oregon Agricultural College and the United States Department of Agriculture.

72 I have been in agricultural work in Oregon for seven years, three years as a county agent in Lake County, south-central Oregon, two years as a district agent in western Oregon, and approximately two years in my present position as assistant county agent leader for the State. I was reared on a farm in eastern Oregon, spent all but five years of my life in Oregon, and attended the Ore-

gon Agricultural College and graduated from that institution. Immediately upon graduating I went to Lake County, as county agricultural agent. (135.) I appeared and testified on behalf of Lake County in the previous hearing in the railroad construction case. At that time I made an extensive survey of the agricultural and other possibilities of Lake County. At the request of the Oregon Public Service Commission I have made a complete agricultural survey of the State of Oregon for the purpose of this investigation, that is, of the counties which we deemed would be benefited by the construction of this proposed railroad. I personally visited each of the counties and while in those counties I took up with various local people, commodities which those counties produced, the markets to which they went to a degree; then after doing that I drew upon the personal sources of information such as the census reports of the Bureau of Crop Estimates, reports of the Oregon State engineer and so forth, and compiled the data which is in this exhibit.

Prior to undertaking this special study my duties as assistant county agent leader for the State took me into the various counties of Oregon and brought me into direct contact with agricultural interests and the needs of agriculture. Probably that is why the public service commission (136) asked me to collect this data because as assistant county agent leader, carrying on work of an administrative nature with the 27 Oregon county agents, I visited each of
73 these 27 counties sometimes two, sometimes three or four times a year. Of course, in the conduct of my work we meet with the local people and develop a program of agricultural development work for the particular counties in which we have county agents. That enables us to know something about the agriculture in each of these counties. The 27 counties do not cover the entire State; there are several without county agents.

I have prepared in exhibit form the results of my studies.

(Thereupon said document was offered and received in evidence marked "Exhibit No. 1, Witness Teutsch.")

I will briefly describe what I was undertaking to do in compiling this (137) report and how it was compiled. As I said I visited each of these counties which we feel would be benefited by the construction of a cross-State line. The counties which we deemed would be benefited were in western Oregon, Linn, Benton, Lincoln, Lane, Coos, Douglas, Josephine and Jackson; in eastern Oregon, Malheur, Harney, Lake, Deschutes, Crook, Jefferson, Wheeler, Grant, Baker, and Klamath. In this data no attempt has been made to list all the agricultural tonnage which originates annually in the various counties, consideration being given only to those commodities which will move east or west via the proposed cross-State line and the quantity of movement. The agricultural tonnage considered in this statement in most instances involves 50 per cent or less of the annual shipments in the various counties under consideration. Wherever possible, official records were used, such as data contained in the

U. S. Agricultural Census for 1925, Bureau of Crops and Livestock Estimates, U. S. Bureau of Agricultural Economics, U. S. Reclamation Service reports and reports of the Oregon State Engineer, and where these did not apply local sources were drawn on.

73½ Following is a detailed list of the sources of information: Data relating to area, agricultural wealth, number of farms, acres of orchards and crops, all taken from the 1925 (138) U. S. Agricultural Census. Car lot exports of fresh and dried fruits taken from the records complied by the Bureau of Agricultural Economics, U. S. Department of Agriculture; the destination of products determined from dealers' shipping records, U. S. Bureau of Economics data, and from shippers; numbers of livestock are figures given by the U. S. Bureau of Livestock and Crop Estimates, U. S. Department of Agriculture for 1926; the yields given

74 are averages recognized in the various counties and are conservative. The data on irrigation and irrigated areas were taken from the official Government and State reports. No attempt has been made in these data, because of the inadequacy of information, to estimate the incoming tonnage utilized on farms in the territory, of such commodities as spray materials, farm machinery, fertilizers, and the like, which might move via this proposed cross-State line.

Now in page 1, concerning Malheur County: Malheur County is the second largest county in Oregon; it has an area of 6,325,120 acres, of which 7.7 per cent, or 484,820 acres, is in farms. The valuation of the entire agricultural industry is $19,627,804, owned or operated by 1,331 farmers. There are in the county 368,600 sheep and 39,040 beef cattle (139), and it is from these two sources the county derives its major income. Alfalfa and other hay is produced on approximately 50 per cent of the irrigable land, and wheat also brings substantial income. Both dairying and poultry raising has seen rapid expansion since 1920. The county has 4,745 dairy cows and doubled its production of dairy products between 1920 and 1925. Other crops exported include apples, prunes, clover seed, alfalfa seed, potatoes, lettuce and onions.

In climate and productive power the Snake, Owyhee, and Malheur River valleys are similar to the Yakima Valley in Washington and rank with the most productive districts in the Northwest. Records of the Oregon State engineer show a total irrigated area of 118,807 acres in the county irrigated by various means—pumps, gravity projects, and from natural run-off.

Now the estimate of the present agricultural tonnage available for movement over the proposed cross-State railroad westbound is listed on page 1. We arrive at these figures in this way: There are 368,000 sheep in Malheur County, from which there is an

75 annual turnover of 50 per cent. Thus 184,300 sheep are marketed annually. Practically all of these are lambs and

now move to Eastern markets. Approximately 25 per cent of these would move to California as fat lambs, or 46,075, in case the cross-State line were built, making a tonnage of 1,843, or 184 cars, as you see there. (140.)

Now then, for cattle there are 39,040 cattle in Malheur County, of which 22 per cent are marketed annually, or 8,588, all of which would go over the proposed line to California, or Northwest markets, giving 4,723 tons cattle, 378 cars.

There are 7,705 hogs in the county. The annual turnover is 128 per cent. Thus, 7,862 are shipped out annually after deducting local requirements, or 776 tons, 79 cars.

From butter: The Farmers' Cooperative Creamery, located at Payette, handles six-sevenths of the butterfat produced in the county and report purchasing 800,000 pounds of butterfat in 1927. This would make 944,000 pounds of butter, all of which goes to California, or 472 tons, 31 cars.

From horses: There are 16,570. 28 carloads on an average are shipped west annually, 398 tons, or 28 cars.

From wheat: 7,566 acres of wheat, which produced for export in 1927—227 cars, making 9,410 tons or 227 cars.

From dressed poultry: The Farmers' Cooperative Creamery shipped 8 cars of dressed poultry to California in 1927, 25% of which originated in Malheur County, making 30 tons, or 2 carloads.

There are 2,134 acres of bearing apple trees in Malheur County. About 50 per cent of the production is shipped from Idaho points across the Snake River. Average carloads shipped for three years is 552, of which, if the cross-State (141) line was constructed, 25 per cent would go to California, 2,346 tons, 138 cars.

76 From potatoes: During the past four years the county has produced an exportable surplus of potatoes ranging from 140 carloads to 441 carloads, with an average of 234 carloads. With a cross-State line the estimate is 75 per cent would go to California and other southern markets, making a total of 3,132 tons, 174 cars.

The total present tonnage, 23,050, 1,241 cars.

Next on that page you see irrigated lands in Malheur County listed, taken from the report of the Oregon State engineer, in a total irrigated area at present of 118,807 acres.

On the same page you find a list of the new projects now under process of construction, or constructed and under development. The Owyhee project now under construction by the Federal Reclamation Service consists of 158,567 acres, of which 117,851 acres is pronounced as good irrigable land. The estimated cost is $17,404,000. In addition to irrigating new land this project will supply supplemental water to 31,366 acres of land in Malheur County and 27,234 acres adjacent in Idaho now inadequately supplied, thus increasing its productiveness. Of the 80,900 acres of the new land to be irrigated by the project approximately 56, 400 acres of it lies in Malheur

County, contiguous to the areas now irrigated, the balance of 24,500 lies adjacent in Idaho, near (142) Homedale, making a total of new land to be brought under irrigation of 80,960 acres.

The Vale project, now under construction, comprises 28,350 acres adjacent to the low valley lands along the Malheur River near Vale. Of the total acres 3,570 is now inadequately irrigated and supplemental water will be provided. The net area of new land to be irrigated is 24,780 acres. The estimated cost of the project is $3,587,305. Thus, within the next few years the Federal Government will expend on irrigation projects in Malheur County
77 $20,991,305. Now these projects will be devoted to the production of products largely needed in increasing quantities on the Pacific coast, such as butter, cheese, dressed poultry, lamb, beef, pork, and similar commodities.

Additional areas which are in the process of development include the Jordan Valley project—the balance to be watered is 9,500 acres; the Warm Springs project—balance to be watered, 4,000 acres; and the Westfall project—the balance to be watered, you see ,on page 2, 4,050 acres; making the total new lands to be irrigated in Malheur County, 123,290 acres, or an increase of more than 100 per cent.

Now then, in addition, the Owyhee project displaces pumping units on 19,366 acres in the county, and on the 27,234 acres in the Gem district of Idaho, which receives inadequate water, and will supplement water supply on 12,000 (143) acres under the old Owyhee project. Thus, production will be increased, due to better water supply, by 25 per cent on 58,600 acres.

Now these data, as we indicate, were taken from the report of the Bureau of Reclamation by Dr. Elwood Mead, 1925, and from the report of the Oregon State engineer, 1924 and 1926.

Next is an estimated utilization of the land to be irrigated. Now we have based this utilization on our personal knowledge of the territory, having been reared in Malheur County, the type of agriculture that will be establised on the projects which are now being developed. We based all of our tonnage estimates on the utilization of the land according to this table on page 2.

Now, then, as to the tonnage which the development of these projects will make available, 26,312 cars of alfalfa, producing at the rate of 5 tons per acre, and 8,096 acres of clover at 2 tons
78 per acre, produce 147,750 tons. Deducting the ranch requirements for dairy cows on each 80 acres and for horses and other livestock of 46,552 tons, there would remain 101,200 tons of alfalfa and clover with which to fatten steers and lambs. Estimating that 50 per cent of this hay will be fed to cattle and 50 per cent to sheep, 50,000 (144) tons feed for beef cattle, which gain on an average 60 pounds per ton, produce 1,518 tons, or 121 carloads. The same amount of alfalfa and clover fed to lambs, which gain

about 22 pounds per head in ninety days when fed barley with alfalfa, would produce 2,922 tons, or 292 cars.

From corn fed to hogs, figuring that 80 acres would fatten out 30 hogs annually to 200 pounds, corn from 6,072 acres at 50 bushels would produce 3,000 tons, or 300 carloads of hogs.

Butter produced by dairy cows: Figuring that each 80 acres will run 10 cows, will be 10,120 cows on the project, producing annually 250 pounds of butterfat, all of which would go to California, as it does now, giving 1,475 tons or 98 cars.

From potatoes, 4,048 acres at 125 sacks per acre, figuring 50 per cent moving west via the proposed route would give 12,600 tons or 700 cars.

From wheat grown on 16,192 acres at 40 bushels per acre, deducting the farm seed and feed requirements of 100 bushels per 80 acres would give you 16,192 tons, or 390 cars; making a total from the new land to be brought under cultivation on the Owyhee project of 37,707 tons, or 1,901 cars.

Now a more adequate supply of water for 46,000 acres of land now being supplied by pumps and more water for the 12,000 acres under the old Owyhee ditch, would increase the present estimated tonnage for westbound shipment by 25 per cent (145) of the following commodities: You see that listed under 2, page 2, including sheep,
79 hogs, butter, wheat, and potatoes, making a total from additional water on old lands of 3,909 tons, 172 cars, making a grand total as a result of the construction of the Owyhee project of 41,616 tons or 2,073 cars, per annum.

The totals given are totals to move over the cross-State line and not total production from the project. I figured the percentage which we estimated would move west, not considering what would move over other routes.

Mr. SPENCER. If I may interrupt there, that is a different statement than the one made to you by Mr. Ellis. You say it is to move west; do you figure everything is to move west via this cross-State line?

A. The figures which I have given here are given as traffic which will move over this cross-State line.

Mr. SPENCER. Or would move west, which?

A. That will move west via the cross-State line.

Mr. ELLIS. And does not include the total tonnage to be produced. You understand that?

Mr. SPENCER. I understand that, but why he states it will go west via the cross-State line is what I don't understand (146).

All the yields given are those given by the Reclamation Bureau in the Mead report of 1925, except for alfalfa. The bureau used the yield of 4.5 tons per acre, which I know is exceptionally low, and I have used here 5 tons per acre in this statement.

Now the plans provide for the completion of the Owyhee project within five years, and the tonnage should be available as follows:

20 per cent the first year, 15 per cent the second, 15 per cent the third, with a 10 per cent annual increase thereafter until the project
80 is under cultivation. There will be no tonnage—that is, there is not likely to be any tonnage from the Owyhee project within five years.

Now from the Vale Project, we made an estimated utilization of the land on that project also, which you find under 3, on page 3, and on that basis we computed the tonnage which will result from the construction and placing under cultivation of this project hay grown on 8,053 acres at 4½ tons per acre would produce 36,240 tons, less the ranch requirements of 46 tons for each 80 acres to keep 10 cows and other livestock, which leaves a surplus of 22,026 tons. Feeding these 11,000 or half of this 11,013 tons to steers, which gain 60 pounds per ton, you would have 330 tons, or 26 cars. From sheep you would get 11,000—from alfalfa, rather, figuring on shipping the surplus of alfalfa, or half the surplus of alfalfa to western Oregon and to coast counties, 11,013 tons, or 734 cars (147).

From corn grown on 1,858.5 acres, yielding 45 bushels per acre, you would get 83,632 bushels, which is sufficient to fatten, along with some barley, not otherwise figured, 9,270 hogs at 200 pounds, figuring 30 to each 80 acres, gives you 977 tons, or 98 cars.

From potatoes, 1,239 acres, a yield of 112 sacks per acre will give you 6,938 tons, 375 cars.

I skipped butter. Taking the production of dairy cows at 250 pounds per acre you would have 457 tons of butter, or 30 cars.

From wheat, 4,956 acres at 35 bushels will give you 4,647 tons or 112 cars; making a total from the Vale project of 24,362 tons or 1,375 cars.

The Vale project is now under construction and plans provide for its completion within the next three years. Within five years 30 per cent of the tonnage estimated should be available, 15 per cent additional the following year, 10 per cent per year additional thereafter until the project is under cultivation.

81 From the Jordan Valley irrigation project, which has 9,500 acres yet to be irrigated, on a livestock basis primarily because of its distance from shipping point, it should produce 250 pounds of pork, beef or mutton per acre. Figuring land utilization on this basis you would get 593 tons of cattle, 48 cars, 594 tons of sheep or 60 cars, making a total from (148) the Jordan Valley project of 1,187 tons, 108 cars.

On the Warm Springs project there are 4,000 acres yet to be brought under irrigation, a total of 17,000 acres in the project. Figuring 2,000 acres of wheat at 35 bushels will give you 2,100 tons, or 50 cars; 2,000 acres of barley at 50 bushels, 2,400 tons, or 80 cars; making a total from the Warm Springs project of 4,500 tons, or 130 cars.

As to whether any progress is being made in completing the Warm Springs and Jordan Valley projects: There is progress being made

on both. On the Jordan Valley project people are getting in better condition each year and more of the land is being brought under cultivation. On the Warm Springs project, the area of it is being cut down, practically all the poor land has been eliminated, the project reduced to 17,000 acres, of which there is 4,000 of reasonably good land still to be brought under cultivation.

Now from the Westfall project, figuring utilization as given in the table, page 4, under paragraph 6, we have 150 tons from hogs, 15 acres; alfalfa, 3,014 tons, 200 cars; butter, 147 tons, 10 cars; wheat, 912 tons or 22 cars; making a total of 4,223 tons, or 247 cars.

The Westfall project consists of good land and has been (149) pronounced feasible by the State engineers, and will no doubt be developed if immediate transportation and markets are provided. There is 1,800 acres which are now watered by the natural run-off.

82 The project proposes to irrigate 4,050 acres additional as a result of storage of water.

Now 40 per cent of the total tonnage from the Jordan Valley project, the Warm Springs and the Westfall projects should be available within five years, the balance becoming available whenever the Westfall project is constructed. This gives a total tonnage value for the cross-State road, as listed on page 4, figuring present tonnage at 23,050, 1,241 cars; additional available within five years 11,531 tons, or 659 cars; making a total within five years of 34,581 tons or 1,900 cars additional potential tonnage within the next few years, that is the tonnage which will develop from the putting under cultivation of the Owyhee, the Vale project, the completion of the Jordan Valley project or putting under cultivation the balance of the land in Jordan Valley, the Warm Springs and the Westfall projects, the bulk of it will come from the Vale and the Owyhee projects, which are now under construction. (150.) By the "next few years" I mean the Owyhee project will begin to come into production as soon as it is completed, which we estimate will be five years, and thereafter my estimates on that are that 20 per cent will come in the first year, 15 per cent the next, 15 per cent the third, the 10 per cent annual increase thereafter until the project is completed.

Now the Vale, which is now under construction and will be completed within three years, we expect 30 per cent of the tonnage to be available within five years, 15 per cent additional the following year, and 10 per cent thereafter. So that the bulk of this tonnage will be available within a few years—within a comparatively few years.

83 Not all of these projects are Federal projects but the two largest are, the Owyhee and the Vale, comprising by far the greater percentage of the acreage here listed. The Jordan Valley and the Warm Springs and the Westfall were proposed as State projects and are under the State irrigation law.

Q. Will you complete the statement of the summary of tonnage?

A. It gives a total additional tonnage within the next few years of 64,357, or 3,274 cars, making a total tonnage, including present, that are available within five years and that will be ultimately available of 98,938 tons, or 5,174 cars, from Malheur County. (151.) Of the total of 5,174 cars, 1,241 cars would be now moving. That is the present tonnage, moving via some other route. That would be diverted to the cross-State line. Now, the conservativeness of these potential tonnage estimates is apparent, as the estimates are based on the utilization of 72 per cent of the new irrigated lands in the production of crops to be fed dairy cattle and livestock, thus getting those products into the most concentrated form possible.

Now, I might say that in case there were natural expansion of crops, such as potatoes, onions, apples, and wheat, which are grown in considerable quantity in this territory, these figures of course would be greatly increased. As an example of that, at Harper, where there is some settlement going on at present, 3,000 acres of old meadowland was subdivided and 31 new families are farming in that area, and they expect to ship this year 50 carloads of wheat (152), representing an increase of several hundred per cent.

84 That is just an example of the development that could alter these figures that I have prepared and increase the tonnage.

The Owyhee projects extend from a point west of Ontario and four or five miles north, south, a point west of Nyssa, on out to Homedale, and extends over into the Gem district of Idaho. The Vale project is located west of Vale, near Vale, in Malheur County. The Warm Springs project is located in the vicinity of Vale, extending towards Ontario. The Jordan Valley project is located in the Jordan Valley. I think it is about 125 miles southeast, or southwest of Ontario. And the Westfall project is located say about 50 miles, I am not sure about those distances—west of Vale.

Ontario, the elevation, as I recall, is about 2,100 feet; the Owyhee project, the bulk of it is about 2,250, I would say—2,250 feet elevation; the Vale project, the elevation increases slightly; Jordan Valley, about 2,800, if I remember correctly; and the Westfall some place around 3,000. But the two important projects, the Owyhee and the Vale, are low elevation projects, with climatic conditions similar to those (153) which prevail in the Yakima Valley, production about the same. The areas described are particularly suited for the production of the commodities listed in my statement. A study of the consuming markets at present, and the immediate facilities reaching those markets as a result of the construction of this line has guided me in determining the direction of movement and ultimate market of these commodities.

Harney County is located in south central Oregon. It is the largest county in the State, has a land area of approximately 6,357,000 acres, this being nearly as large as the State of Maryland, and larger than Massachusetts and Rhode Island combined. There are

in the county 185,730 sheep and 59,620 cattle, according to
85 the U. S. Bureau of Livestock and Crops Estimates. This is about one-half the normal cattle population of the county, but represents about the normal number of sheep run. Practically the only source of income for this district at the present is from livestock—cattle (154), sheep, a few hogs, and horses, which utilize the ranges and fenced pastures during the summer months, and they are fed on the native hay produced on several hundred thousand acres of meadow land during the winter. There is invested in the agricultural industry in the county $15,760,176, which is owned or operated by 681 ranchers and stock men. The total area irrigated during the flood season when maximum run-off is obtained is 238,603 acres. The average elevation of the producing areas in the county ranges from 4,100 to 4,300 feet and climatic conditions are very similar to those prevailing in the Klamath Basin, in Deschutes and Crook Counties, and in the Goose Lake Valley of Lake County, all of which are sections where intensified irrigation farming has proved successful.

Now the irrigable lands in Harney County you will find listed on page 5. These are principally taken from a report of the Oregon State engineer, and some of the acreage was obtained from local residents, which was not given in the report of the State engineer. The Blitzen River and tributaries are not included in the State engineer's report. Waters from the east slope of Steins Mountains are not included in that report.

Now the agricultural tonnage available at present in Harney County:

There are 185,730 sheep, of which there is an annual turnover of 50 per cent, thus making available for market (155) 92,865. While all of the lambs now move east, approximately 25 per cent would move to California as fat lambs via the proposed line. This
86 would give a tonnage of 870 or 93 cars.

With reference to the approximate market to which these various commodities would move: So far as preparation of this data is concerned, there is no question but what all of this livestock would go to Crescent, across this line. Then the stockman will have his choice of two southern markets, San Francisco or Los Angeles, or he can go to Portland or Seattle, without materially increasing his distance.

I have omitted everything that would move east—for instance, in the figure I just gave you I am only using 25 per cent of the lamb crop of Harney County as moving west, 75 per cent of it we are figuring is going to go the way it now goes. Now for cattle, there are 59,620 cattle with an annual turnover of 22 per cent, 13,116 will be (156) marketed annually providing 5,902 tons, or 473 cars.

From hogs, there are 2,340, of which there is an annual turnover of 128 per cent, which gives 269 tons, or 27 cars that would be marketed annually.

Wheat—since the railroad reached Burns in 1925 the production of wheat has increased each year, and a 50 per cent increase is expected this year; tonnage to be available from wheat 1,530, or 37 cars.

Horses—13,850 horses, approximately 20 carloads are shipped out annually, 230 tons or twenty cars; making a total present tonnage in Harney County of 8,801, or 650 carloads. The 650 is just the amount that would move over the cross-State line. Now as to the potential tonnage for a cross-State line as a result of the development in Harney County from the division of large holdings which now have adequate irrigation works, there would be considerable tonnage accrue. There are five companies, the Eastern Oregon
87 Livestock Company, the Pacific Livestock Company, the Oregon Western Colonization Company, the William Hanley Company, and the Harney Valley Improvement Company, which own 490,206 acres in Harney County. I was informed that these holdings are being offered for sale, and on some of them definite effort is being made to obtain (157) settlers. While a few settlers have been obtained for small holdings, serious difficulty is being experienced because of the distance from markets due to the circuitous route over which products must go, virtually eliminating a choice of markets. Through such division of holdings resulting in better and more intensified agriculture there are 80,000 acres now largely producing native hay, half of which can be made to sustain the normal livestock population, thus releasing 40,000 acres for other purposes. The area capable of such development with existing irrigation works lies in the Blitzen River Valley.

A reasonable utilization of this land, based on the present production of similar districts, would be as follows: 50 per cent to alfalfa, 10 per cent to pasture, 15 per cent to wheat, barley 20 per cent, and buildings 5 per cent.

On that basis we have computed the tonnage from this area, the development of this area, 40,000 acres, on page 6, the first table, giving it for cattle, sheep, hogs, barley, and oats, and wheat, a total of 9,252 tons, or 362 cars.

This suggested land available for subdivision is about 30 miles, as I recall, southwest of Crane and the proposed route given in the complaint would come within about six miles of this particular area. (158.) Probably the furtherest point in the 40,000
88 acres would be 12 or 15 miles from the railroad. In the main this land lies south of Malheur Lake. From the projects requiring construction of irrigation works pronounced feasible by U. S. Reclamation Engineers, there is also possibility for developing potential tonnage. The report of John T. Whistler, engineer for the U. S. Reclamation Service, and John H. Lewis, Oregon State engineer, made in 1916, after a careful survey, pronounced feasible the storage of the waters of the Silvies River and its tributaries through the construction of dams, thus controlling water on 60,000

acres of wild meadow now irrigated from flood waters and providing water for 40,000 acres additional sagebrush land. We have reduced, for conservativeness, the proposed sagebrush area to be irrigated from 40,000 to 30,000 acres, figuring that such development would double the production of the present meadow land, thus releasing 30,000 acres of it for other purposes, making a total of 60,000 additional acres in the Harney Valley to be brought under or subject to development. With the same basic utilization of land contemplated for the Blitzen development, and on the basis of similar yields, the potential tonnage from this development would be as given under paragraph 2–A, Harney project, making the total tons of 12,355 cattle, sheep, hogs, barley, and oats, and (159) wheat, or 479 cars. Now as to just when such development will start and the time required for its completion can not now be forecast. Serious consideration has been given such development in the past and an irrigation district has been formed under the Oregon State laws. Improved market outlets would, no doubt, hasten this development.

The Silver Creek project: This project was pronounced feasible in the Whistler-Lewis cooperative report of 1916 providing reservoir construction to store flood waters, thus controlling the water on approximately 24,000 acres in the Silver Creek Valley, located
89 west of Burns—southwest of Burns. Controlling water on 24,000 acres and increasing its production would release 12,000 acres for other purposes, at the (160) same time provide feed to maintain the present livestock population. Using again the same basic figures on land utilization and yields as we used for the Blitzen and Harney projects, we would get the tonnage listed in Table 2 (b) on page 6, making a total of 2,428 tons, or 92 cars.

The summary for Harney County appears at the bottom of the page. Present tonnage 8,801, 650 cars; additional available within five years, as a result of development of the Blitzen Valley, which now has irrigation works constructed, would produce 3,700 tons, or 144 cars; making a total within five years of 12,501 tons or 794 cars.

Additional tonnage to be available upon complete development would be 20,335, or 789 cars, making a total, upon complete development, of 32,836, or 1,583 cars.

These estimates are likewise based upon untilization of 72 per cent of the lands under consideration for the production of livestock products. An increase of wheat, or other grains or potatoes, would substantially increase these figures. For computing the figures relating to Harney County, the yield per acre allowed was as follows: Wheat, 30 bushels, barley, 40 bushels, oats, 65 bushels. (161.) You find on page 7 of Exhibit 7, year average yield of crops grown at Harney Branch Experiment Station at Burns, period 1920 to 1927, giving the amount of water used, the bushels or tons per acre harvested, and then a third column, or fourth column, giving the yields used in the figures which are in my computations.

Take Federation spring wheat, 12 inches of water produce on an average of 51.9 bushels per acre. The figure I have used is 30 bushels. Hybrid 128 winter wheat produced 41.6 bushels per acre. I used 30 bushels. Swedish select spring oats produced with 12 inches of water 70.6 bushels. I have used 65 bushels. Trebi
90 barley produced on an average 56.8 bushels. I have used 40 bushels. Grimm alfalfa has yielded with 15 to 18 inches of water 7.25 tons, and I have used 3 tons, indicating the conservative nature of the figures which have been used here.

Incidentally these figures of the experiment station based upon this seven year period include one year in which there was a total crop failure.

At the bottom of page 7 you see approximate ownership of land by various large holding companies in Harney County, and these lands are now for sale and are being subdivided and sold off. On page 8 you will see summary of cost of establishing a pumping plant by the Harney County Branch Experiment Station (162) at Burns.

The last session of the Oregon Legislature appropriated $8,000 to be used on the Harney Branch Experiment Station near Burns to determine the following:

First: The cost of drilling and casing a well to supply water for an 80 acre farm unit:

Second: The cost of suitable engine and pump, installation and operation of same.

Third: The cost of preparing and leveling 80-acre tract for irrigation.

Fourth: The cost of distribution system; and

Fifth: The cost of producing crops under irrigation by pumping. A well was drilled to a depth of 85 feet and cased with an 18-inch galvanized steel casing to a depth of 60 feet. A Kimball turbine, deep well pump, is used, operated by a 25 horse-power semi-Diesel engine. The well furnishes an average flow of 1.7 second
91 feet, which is sufficient water for 80 acres. When not drawn on, the water in the well rises to within 6 feet of the surface and when pumped on for 12 hours or more gradually draws down to 42 feet, where it remains. The average lift is 35 feet during a 12-hour pumping period.

You will find listed there the cost of installing a pumping plant on the station, totaling $3,720.24.

Last year was the first year that this pump was under operation. A summary of the cost of producing federation wheat (163) and Grimm alfalfa on 19.4 acres with pumped water during 1927. Now this tract of 19.4 acres was used and these data because it represents what would be average farm operation conditions. The total cost of pumping on this area of 19.4 acres was $396.68. There was a revenue, which is not listed here but which I will give you from that 19.4 acres, of the following: 4,000 pounds of seed wheat at 2½ cents, $100; 5,785 pounds of feed wheat at 1½ cents, $86.78; 5.8 tons of

wheat straw at $3.00, $17.40; 2,800 pounds of Grimm alfalfa seed at 30 cents, $840.00; 13.4 tons of alfalfa straw at $3.50, $46.90; making a total return of $1,091.08, or a net return per acre of $35.79.

The test of irrigation by pumping shows that it can be done, that it is being done, and that good yields of crops can be obtained on a profitable basis. In our estimates, we have not taken into account the possibility of this type of irrigation. We excluded in our estimate of tonnage all possible development from pumping irrigation. There are thousands of acres which could be utilized on a pump irrigation basis in Harney Valley. In our estimate we have included

(165) only projects to be irrigated by gravity systems.

92 Would add one word in regard to Harney County yields. This experiment station is located on land which has been classified by soil experts as being medium to poor, not even average of the land in Harney Valley.

As to northern Lake County, which will be crossed by the proposed railroad, it consists of approximately three million acres, of which 320,800 acres is in the Fort Rock, Christmas Lake, Silver Lake, Summer Lake, and Sycan Valleys. Of this area, 56,100 acres is now irrigated, or can be irrigated, with the present projects; approximately 25,000 acres is dry farmed in the area, principally cropped to rye, which is cut for hay. (167.) Beef cattle, sheep, horses, a few hogs and cream under the present conditions are the only commodities for export. The agricultural tonnage available in this area at present is listed in the first table on page 10 of the exhibit, making the total of 2,376 tons, or 213 cars, sheep, wool, beef cattle, horses, cream and hogs and miscellaneous products. When I prepared this data in February I didn't have complete data on the movement of wool, and there should be a change in the direction of this movement. Wool from Deschutes, Jefferson, Crook, Lake, and Klamath Counties, I have proposed to move east via the cross-State. In recent years this wool in increasing quantity is moving towards Portland. I failed to take into consideration that Malheur County and Harney County wool would move west over this line, which would really mean a gain in tonnage in so far as the cross-State is concerned, and increase the traffic rather than decrease it, as a result of this change in direction of movement. The northern Lake County tonnage, whether moving east or west, will necessarily move over the cross-State line, or a portion of it. (168.)

92½ I will indicate what portion of Lake County I have included in my study: Approximately 50 per cent of the county I have considered as tributary to the line. That territory north of Paisley, in Lake County, will be closer to the cross-State road than it is to the present railroad which terminates at Lakeview. As to the maximum distance of haul from Lake County points, which I have included in my study, to the location of the proposed line, the Summer Lake territory is as far south as I have gone in these figures and that would be about 30 miles.

93 The areas capable of development consist of the Summer Lake irrigation district of five thousand acres, which is now completed and ready for settlers; also the Silver Lake irrigation project, likewise completed, consisting of 6,500 acres. We would estimate that of the 230,000 acres in the Fort Rock and Christmas Lake Valleys that 46,000 acres of this could be selected to be situated properly which would make something practical and it is on this basis we have made our computations. In the Fort Rock Valley in 1922 the Oregon Bureau of Mines (169) made an extensive study to determine the extent of the subterranean water. The report states as follows: "That eight weeks of field study indicate that the Fort Rock Valley is in a syncline or depression caused by the sinking down of the series of volcanic rocks prevalent in central Oregon. The leaning walls of the depression are from 1,500 to 2,000 feet thick; the ground water level in this basinlike valley varies in depth from 15 to 40 feet below the surface." Now, the conclusions drawn by the geologists as indicated by this report were verified when four wells were actually drilled in this territory as result of a State appropriation. Repeated tests have shown that a two-second foot stream of 900 gallons per minute can be pumped continuously from a twelve-inch hole which has been drilled to a depth of two hundred feet, with a drawn-down of only two and one half feet. As to whether the portion of Fort Rock Valley where the test wells have been put down will produce crops: In 1922 or 1923, while I was county agent, we planted the first crops on the John Ernst farm in Fort Rock Valley (170) which has continued to be developed. There is on
94 the Ernst farm now 50 acres of alfalfa and about 10 acres of wheat. This Ernst well, as I recall, is drilled to a depth of 200 feet and the water raised to within 24 feet of the surface, drawn-down of two feet, and his lift is now 26 feet and it has stood up under continuous pumping for 72 hours, delivering 1,100 gallons of water per minute. The following is an extract from a recent letter from Mr. Ernst:

"The Fort Rock Valley—there are one hundred eighty thousand acres that can be irrigated, and I believe that with the coming of a railroad that in five years at least 50 per cent of this land will be developed. We have had many prospective buyers here in the last five years, who, while pleased with the crop prospects, when told that we are 75 miles from a railroad, are not interested.

"In the Christmas Lake Valley there is practically the same amount of land, the same water level; with the coming of a railroad this could be developed into one of the largest diversified farming districts in Oregon, but without transportation the State of Oregon will be a long time in realizing any financial gain in any way."

When this valley was settled in the Fort Rock and Christmas Lake Valley there were some 2,000 homesteaders (171) from 1909 to 1912. Practically all of the land is abandoned. These people came in at the time it was proposed to build that cross-State line.

They probably spent in the Fort Rock Valley around two million dollars in time, actual money invested, improvements, expenses and buildings. A large percentage of these homesteads are deserted at the present time. However, there are more people on the desert than one would think.

94½ I have held meetings at Fort Rock when there would be 70 or 75 people. You wouldn't know where they would come from, but they do make a living there, and they are there, running cattle, growing a little rye hay to winter those cattle on, carrying them through the winter.

95 Where there is irrigation by pumping, alfalfa is the principal crop; barley, oats, and wheat.

Q. Is it not true that a large variety of vegetables have been grown for experimental purposes and found successful on the Ernst ranch?

A. They will grow practically anything there that they do in the—any of the hardy vegetables.

It is similar in conditions to the land around Bend and Crook County and in the Goose Lake Valley. (172.) The proposed cross-State line runs about through the center of Fort Rock Valley. Although there are some 230,000 acres in the valley, I have included in my estimate of probable development only 46,000. I base my tonnage figures on the utilization of the land as given on page 10, 40 per cent to alfalfa, 25 per cent to wheat, 10 to pasture, 8 to barley and oats, two to potatoes, and five to farm buildings, et cetera. On that basis, taking three tons of alfalfa as an average yield, from beef cattle we would get 1,551 tons, 124 cars; from cream 1,916 tons, 127 cars; for wheat 8,619 tons, 208 cars; clover and alfalfa seed 517 tons, 34 cars; potatoes 4,305 tons, 239 cars; hogs and sheep 621 tons, cars 62; making a total of 17,529 tons, 794 cars.

Q. Now, is that from both irrigated lands and from dry (173) farming in the Fork Rock Valley?

A. That is just for irrigated lands. The development of irrigated lands in Summer Lake, Silver Lake, Fort Rock, and Christmas Lake Valleys, irrigated lands only.

Mr. DEY. Mr. Commissioner and Mr. Ellis, just by way of a suggestion, I wouldn't think of undertaking to limit the comment upon the exhibit, but this reading of the figures of each of these counties into the record, when it is already shown on the exhibit

96 seems to me quite unnecessary, only encumbers the record, and we are going to be here two or three weeks at the best, and if we give as much detail into the record on all of these exhibits we will not be through within the time fixed.

Mr. ELLIS. I think we can eliminate some of the detail figures on these, but quite a little comment is necessary in order to make the basis on which they are compiled clear. (174.)

Comr. MCMANAMY. I think it would be well, Mr. Ellis, if you only read such figures as are necessary to make the comments clear.

Mr. ELLIS. Yes.

In connection with these figures, we arrived at them on the basis of the following yields: Alfalfa, 3 tons per acre; wheat, 20 bushels per acre; clover and alfalfa seed, 3 bushels per acre; potatoes, 75 sacks per acre and barley 40 bushels per acre. Of this potential tonnage listed we estimate that 10 per cent should be available one year after the cross-State line is constructed, with 50 per cent available within five years. The development of an extensive hay-producing territory in the Fort Rock and Christmas Lake Valleys, which are available to adjacent desert sections, where a good many thousands of sheep winter annually, would result in a larger proportion of both Klamath and Lake County sheep wintering in this district than is the case at present. (175.) My figures do not
96½ contemplate an increase in the number of sheep handled in this region, but I have heard a number of stockmen in Lake County and Klamath County say that if they could get supplies of hay adjacent to the desert they would winter in that region. Contrary to general description, stockmen in that country call the Fort Rock Valley and the Christmas Lake Valley the low desert because of the fact that there is a very small amount of snow there in the winter time. Almost every winter a good many thousand sheep and cattle stay out there and browse all winter. It is my suggestion that with transportation the grazing possibilities of the area that is now unproductive would be much better utilized. Figures supplied me by Mr. Ernst show that the cost of establishing his irrigation plant in the Fort Rock Valley was as follows: Cost of drilling and casing the well, $450; the cost of a Lane-Bowler pump, plus freight, $750; cost of a Diesel engine-plus the freight, $1,187, making total of well and equipment $2,387. The cost of operating the pump per day, according to Mr. Ernst's figures: (176), Two hours, labor, care for engine, at 60 cents an hour, $1.20; fuel for engine, 15 horsepower, 12 gallons at 18 cents, $2.16; lubrication, 12 pints, at 7⅛ cents, 85 cents; total cost, exclusive of interest or depreciation, $4.21. His total operating costs for the 1927 season, when 50 acres were irrigated, show a total cost of $275.91, or $5.51 per acre. In that year 4 tons per acre of alfalfa were obtained in two cuttings; 40 bushels of Dicklow wheat per acre. This cost per acre is based on 50 acres. The cost per acre for irrigation by pumping can be compared with cost of irrigation by gravity system. The cost of gravity water varies a great deal—most of the projects running from $4.00 to $8 per acre. There is no question but what this cost in Fort Rock Valley would be reduced with transportation. They truck their
97 fuel now 75 miles, if they are shipping it to Bend (177) or the cost could be decreased a great deal by having power and by having direct rail transportation to the valley for fuel, in case they continue to use oil. There is plenty of power in the central Oregon country, plenty of water on the Deschutes, and I understand there has been a preliminary survey made contemplating the development

of electrical power. The $5.51 I mentioned is the cost per acre per year.

The cross-State line traverses the Christmas Lake Valley and it is very similar to the Fort Rock Valley. It is relatively level, susceptible to being irrigated with little difficulty. (178.) Both the Summer Lake and Silver Lake irrigation projects are now in use. They are not settled 100 per cent and they are having some difficulty financially but plans are under way for a refinancing to settle these projects, providing transportation is brought closer.

The agriculture of northern and western Klamath County is largely developed to livestock production. Both sheep and cattle graze on the timberlands, in which there are numerous mountain meadows with luxuriant grass. While the bulk of agricultural tonnage moves to coast markets, lambs and wool move east in considerable volume.

There are 68,120 sheep in Klamath County, of which 34,060 are marketed annually. Of these, on an average, 35 per cent or 11,921 go east as feeders. Because the route via the cross State would be approximately 313 miles shorter than the present route, and traversing feeding territory almost its entire length, these sheep would move via the cross State—35 per cent of the lambs, which is the tonnage indicated on page 12. The item "sheep (the east)," 357 tons is practically all lambs. (179.)

Q. Have you included in that figure only the portion which you anticipate will move through over the line to an eastern mar-
98 ket, or have you included any allowance for feeder sheep moving in and out of the territory served by the cross-State line?

A. I have only included feeder sheep, which now move to the feeding grounds of Idaho or mid-west, and that is all I have included in this figure. About 65 per cent of the Klamath lamb crop are finished down in the Klamath station, and then either shipped south or east.

Clover seed production is just starting in Klamath County, which must find a market in the mid-west and east. Within five years there should be 2,000 acres of clover-seed produced in Klamath County, four bushels which should provide the potential tonnage figure which you see on page 12 with the total available tonnage for the cross-State line given at the bottom of the page, that is 60 cars. (180.) Practically all of the sheep in Klamath County are grazed on the slopes of the Cascades, in the northern portion of the county, and it is figured that these feeder lambs that come off the range in the fall would be shipped via the cross-State line.

The clover seed will originate on the irrigated lands in Klamath County south and east of Klamath Falls. As to the total production that would move over the cross-State line: A very small percentage of it—35 per cent of the lamb crop, and that is an exceedingly small percentage, not more than two or three per cent of the total traffic, agricultural, that originates in Klamath County. That is all the

traffic I have included in Klamath County, the largest undeveloped peach soil in Oregon. There has been a lettuce demonstration there; 60 carloads were shipped out. Being perishable, it naturally would take the shortest route to eastern markets. We haven't taken this into consideration in our estimates but it offers considerable possibility of tonnage. (181.) The present tonnage from Klamath County I estimate would move over the cross-State line is
99 493 tons, or 44 cars. I calculate most of that crop to the East from Klamath County would move over the cross-State line. Within five years I estimate 733 tons, or 60 cars would move over this line from Klamath County.

Deschutes, Crook, Jefferson, and Wheeler Counties:

This block of four counties adjoining in central Oregon are extensive livestock counties. Their total area is 64,801 acres. Within their borders are 200,400 sheep. Wheeler and Jefferson Counties are devoted almost entirely to livestock and wheat growing. On the irrigated lands of Crook and Deschutes Counties, poultry, dairying, potatoes and clover-seed production are rapidly expanding. There are 1,833 farms in the four counties and the agricultural industry is valued at $25,533,000. Figuring an annual turnover of 50 per cent of the sheep (182), about 70 per cent of this turnover is marketed as feeder lambs and go to the feed lots of the Northwest, Idaho, and mid-west points, making a total of the figure which you see under "sheep" on page 13 of the exhibit. There should also be a substantial movement of breeding bands from the Cascade Ranges to Idaho and Malheur and Harney feeding grounds. Thousands of sheep move into this range area from the eastern part of the State annually and are shipped back for wintering. We estimate from this source that there would be a thousand tons, or 100 cars, annually. These sheep just mentioned move from the eastern portion of the State to utilize the ranges of the Cascade Mountains, to a point in Deschutes County, then trail out to the ranges. Some sheep are shipped to the ranges in Crook and Jefferson Counties. They are shipped at the present time and move around via the Deschutes, around rather than across the State. They are loaded on the Deschutes branch somewhere near Bend and move
100 down to the main line of the Oregon-Washington (183) Railroad & Navigation Company and around over the Blue Mountains; the bulk of them are now unloaded in the Umatilla County country. I figure there would be a shifting in the utilization of the ranges in the Cascade Mountains from those people who are down in the Columbia Basin area, sheep men, to open up this territory as a grazing territory to the men in Harney and Malheur Counties. We can eliminate this figure from wool because I failed to take into consideration westbound wool traffic from Harney and Malheur County which has more than offset this which we have been moving east from these figures. We will change all these

figures on eastbound wool from Lake, Klamath, Deschutes, Crook, Jefferson, and Wheeler Counties. (184.) The data which we have submitted here indicate that there would be 941 tons of wool, or 63 cars, moving east via the proposed cross State. We would eliminate all that. In our figures we failed to take into consideration the westbound traffic of wool over the cross State from Malheur and Harney Counties. The clip in these two counties is 4,600,000 pounds of which 80 per cent of it moves west to Portland, or 3,680,000 pounds, making a total of 1,840 tons, or 121 cars, giving us a net gain in traffic of 899,000 pounds, or 58 carloads for the cross-State line. That originates in Malheur and Harney Counties. There is some possibility of wool originating at other points along the line moving eastward over the cross-State line. It is moving east and constantly in smaller volume. Under the present practice it moves to Portland for cleaning and consolidation with other shipments that go either direct by rail or by water to Boston. (185.)

Then on clover seed, as in Klamath County, clover-seed production in this central Oregon territory, Deschutes and Crook Counties is rapidly increasing. There were 100,000 pounds of red clover and alsike and white clover seed produced in these counties
101 this year. Making a tonnage, as you see, of the third item under clover seed. We expect a 500 per cent increase during the next five years and that gives our potential tonnage figure which you see there. When I say 500 per cent increase in clover seed, I simply increase it from 3 to 15 cars. The summary from those four counties is 3,487 tons, 352 cars. The total tonnage after five years is 3,737 or 367 cars. Now in both Deschutes and Crook Counties poultry is rapidly expanding, and it may be that within five years carload shipments of eggs east will be made. From shipping points in these counties the proposed road would shorten the route to Ontario by from 40 to 127 miles, depending on the point of origin and would eliminate the necessity of lifting this traffic up over the Blue Mountains.

In these counties of Deschutes, Crook, Jefferson, and Wheeler, there are enormous quantities of other products produced in addition to the ones listed. (186.)

Q. What are some of the other commodities that are produced in those counties that might move in lesser amounts over the cross-State lines?

A. Oh, I have mentioned eggs here. As a matter of fact, agriculture produces commodities largely which will find an outlet to the Pacific coast. I think I have included practically everything of an agricultural nature. Now, it represents only a small per cent of the production. They produce several hundred carloads of potatoes up in that region; they grow some grain, the dairy industry has increased enormously; but most of these products find a market along the coast. And I would include only those commodities that

would logically move in substantial quantities over the line; I make no allowance for incidental movement of potatoes, or commodities of that kind.

Grant County borders Harney County on the north and like Harney its agriculture consists largely of the production of
102 feed, cattle and sheep, which are 31,280 and 97,870, respectively. The county is now served by a narrow gauge extending from Prairie City to Baker, since last summer by the Herrick logging (187) road which terminates at Seneca. With the construction of the cross-State road, the large percentage of the cattle and sheep would move from Seneca, thence south to Crane and west via the proposed railroad. They would move in that direction since most of the cattle in eastern Oregon find a market in the Northwest, and this territory is practically out of taking advantage of the California market at present. They would ship that way because it would be the shortest route for them, and in addition to that it would give them a choice of markets, the North or South markets, without increasing their distance. There are 31,280 cattle with a turnover of 22 per cent. Figuring 50 per cent would be loaded at Seneca for shipment via this cross-State, you get the tonnage figure as given on page 14. Sheep, there are 97,870 of which there is 50 per cent turnover, or 48,935, which would be marketed annually. Of this estimate, 25 per cent that go as fat lambs off the range, and one-half of these grass-fat lambs we figure would go to California markets, giving the tonnage figure which you find under "sheep," total of 22 cars, with a total present tonnage from Grant County of 159 cars. (188.) The potential tonnage figure isn't represented in any increased tonnage of agricultural commodities from Grant County, as the county is now well stocked, and there are no large areas susceptible of development agriculturally. We would expect, however, within five years, as southern markets opened and expanded to see 25 per cent more tonnage shipped from Seneca than that estimate for the present. This would be a shifting of shipping point, and not an increase due to expanded production. The livestock from Grant County is now loaded from various points, including Prine-
103 ville, Heppner, Condon, Austin. With this cross-State line we figure a larger percentage ultimately would be shipped from Seneca south and southwest. The distance necessary to drive the stock would be decreased through better feeding territory, because Seneca is located in the Bear Valley country where there is plenty of good grass. They could get their stock out of the county with a smaller shrinkage.

The Baker County tonnage is negligible. Baker County is now sending to California markets through Idaho creameries a million pounds of butter per year, giving the tonnage which we have (189) listed there of 500 tons, 33 cars.

There might be a slight movement of fat lambs from northeastern Oregon to California during July and August. We know California

buyers are reaching out to the Northwest territory where they never have reached before. This year some 12 or 15 carloads of lambs were shipped from Heppner around to Portland and then south to California markets.

It is possible that there would be some traffic originate in Baker County and in Union County which would go via the cross-State to California. (190.)

I have included in these 33 cars from Baker all the butter that is now actually moving to California points. It is shipped down to Payette and Caldwell and from there sent to California; now moving through Ogden. I have made no estimate for probable increase in that tonnage or any other commodity that might move to those destinations.

That completes my discussion of the agricultural counties on the east side of the Cascades. Now, crossing the mountains to Lane County, it is the fifth most wealthy agricultural county in Oregon. It has a total agricultural wealth of $36,771,000. There are 4,168 farmers in the county, an increase from 3,279 in 1920, indicat-
104 ing a marked tendency towards intensified agriculture, such as poultry, vegetable raising, fruit production, the bulk of which must go to eastern markets. (191.) Small grain production, livestock, dairying, poultry, fruits, nuts, vegetables provide the major sources of income. The figure of 36 million that I referred to is the 1925 census figure on the value of farm lands, buildings, and equipment; it is not the assessed value. There are 5,550 acres of clover in Lane County, which produces on an average of three carloads of clover seed, fifty per cent of which goes east via rail, giving the figure under "clover seed" on page 15. There are 3,240 acres of apples. During the four years 1924 to 1927 an average of thirty cars annually were shipped. Shippers estimate of these 50 per cent moved east, or 15 cars. There are 736 acres of pears in Lane County, with shipments averaging 21 cars per year. There are 2,784 acres of prunes in Lane County (192) which produce on an average annual yield of 2,784,000 pounds. Fifty-three per cent, 26 cars move east via rail as dried prunes. During the past four years average annual shipments of green prunes have been eight cars. There are 297 bearing acres of walnuts and filberts, which produce an average of 1,000 pounds per acre, providing 6 cars. The Lane County canned fruit, an average pack in 1927 amounted to 313,000 cases, or approximately 400 carloads. This is a growth from eight carloads in 1909. Of the 1927 pack, 33.3 per cent moved via rail to points east of Ogden, or 116 cars. Now western Oregon shipped to points east of Ogden 414 carloads of eggs during 1927, an increase of 33.5 per cent over 1926. Forty-one per cent of the chickens in western Oregon are in the district Linn, Benton, Lincoln Counties and south, all
105 tributary to Eugene. Construction of Pacific Cooperative Egg Producers' branch at Eugene, which is now completed and operating, will no doubt make Eugene an assembling point for this entire

district as far as eggs are concerned. On this basis we have 169 cars of eggs available for cross-State traffic. The car lot importations of corn into Oregon via the (193) Portland gateway in 1927 amounted to 968 cars, an increase from 505 cars in 1925. As more than 40 per cent of the chickens, hogs, sheep, and dairy cattle of western Oregon are in the counties Linn and south, it is reasonable to assume that 40 per cent of this corn tonnage would come via the cross-State line and through Eugene. This corn is shipped largely from Nebraska and mid-west points, 385 cars. Dealers' figures indicate that Douglas, Lane, Benton, and Linn Counties use annually forty cars of alfalfa hay, not figured elsewhere, that will come via this cross-State line, giving 40 cars. There are 50,440 dairy cows in Linn, Coos, Douglas, Benton, and Lane Counties. As the irrigated valleys in eastern Oregon develop, requiring the stocking of dairy cattle, we figure the annual movement of 2,000 head of dairy cattle to eastern Oregon from these counties via the cross State, giving 66 cars.

Feed: Data gathered in 1924 indicates concentrated feed imports into Lane County amounted to 326 carloads, exclusive of corn. One half of this should come via the cross State. There has been a substantial increase since that time, as recent data from every western Oregon county shows, due to (194) the increase in the poultry industry, 168 cars, making a total tonnage for the cross State from Lane County of 1,018. That feed moves from the producing irrigated sections east of the Cascades.

As to potential tonnage: The pear shipments increased 37 per cent from Lane County between 1924 and 1927. Most of the young
106 acreage pears which are coming into bearing are of the late varieties. Local growers expect an increase of 50 per cent in the next five years. The canned fruit inspector estimates 20 per cent annual increase during the next five years, which should be ten carloads. From prunes, 15 to 17 per cent increase is predicted by the U. S. Bureau of Economics in a recent study, trees to come into bearing within the next five years, which would be four carloads. They made a careful study of the dried prune industry in the Willamette Valley—where prunes went, what was the matter with it, and all about it, and that is the figure that they have used as a result of that study. This estimate would largely be produced from orchards now planted (195) that will come into bearing later. There will be no additional planting of prunes. There are 311 acres of non-bearing walnuts and filberts to come into bearing in Lane County. These along with natural increased yield from present growth would increase nut production 200 per cent, so far as export is concerned, or 11 cars. Since 1919, the Oregon pack of canned fruits has increased 103 per cent, and of vegetables 300 per cent, or an average of 117 per cent. The expansion in Lane County has been more rapid than this. Figuring the same rate of growth for the next five years as has taken place in the past nine years, there will be an increase of 65 per cent

in the next five years. Reducing this to 50 per cent for conservatism, we have increased tonnage of 58 cars from canned fruits and vegetables.

Some canners, incidentally, estimate a hundred per cent increase within five years.

Since 1924 the corn imports into Oregon have been increased 90 per cent, growing from 505 carloads to 960 carloads. This
107 corresponds to the expansion of the poultry industry and can be expected to continue, though not so rapidly. Figuring 100 per cent increase in five years, or 385 cars.

From alfalfa hay: As population increases, the whole (196) milk requirements will increase. The dairy herds supplying whole milk are heavy users of alfalfa hay. There should be a 10 per cent increase, or four cars.

Feed: If growth of poultry, dairying, sheep, and swine continues at the same rate as it has for the past five years, a 20 per cent increase in feed requirements would be conservative, or 33 cars.

In eggs, Eugene is bound to become the grading and distribution center for the southern portion of western Oregon. The poultry industry of the State has increased 25 per cent since 1924. The production of export eggs increased 33.5 per cent last year over 1926. It is reasonable to assume that the industry will double in the territory tributary to Eugene within the next five years, or 169 carloads, a total of 674 cars, potential tonnage. That is added tonnage which will be available five years hence, making a total tonnage of 1,692 cars within five years. (197.) From my knowledge of the situation, I believe those figures are conservative. In all of them we used the rate of increase which has prevailed during recent years and then discounted that a little, figuring the rate of increase won't be as rapid as it has.

Douglas County is the largest county in western Oregon and extends from the summit of the Cascade Mountains on the east to the Pacific Ocean on the west. It has an area of 31,941 acres, 18.1 per cent of which is in farms. There are 2,551 farms in the county, which together with buildings, livestock, and equipment represent an investment of $25,820,000.

108 Fruit and vegetable growing provide the major source of farm income, followed closely by livestock, poultry, dairying, cereals, and general crops. Apples: There are 976 acres of apples, of which 500 acres are in commercial orchards. The average annual shipments of apples during the four years 1924 to 1927 were 80 carloads, of which 70 per cent, according to local shippers' estimates, moved to points east of Ogden, or 56 cars.

Pears: There are 880 acres of pears, a large portion of which are yet to come into bearing. Average annual shipments of pears, 1924 to '27, were 71 cars, the number increasing from 69 in 1924 to 88 in 1927. Fifty per cent moved east, or (198) 35 cars.

Dried prunes: There are 11,000 acres of prunes in the county, from which there is an average crop of ten million pounds, of which fifty three per cent moves east via rail, or 95 cars.

Of green prunes, the average annual shipments to the east, 1924 to 1927, were 50 carloads.

From fresh cherries: There are 200 acres of cherries in the county. Shipments from 1924–27 averaged 3 cars annually.

Canned fruits and vegetables: The 1927 pack in Douglas County was 80,000 cases. Twenty per cent annual increase for several years is anticipated. Sixty per cent moves east via rail, or 400 cars.

From broccoli: The average annual shipments of broccoli during the past four years have been 419 carloads, all of which go east. Broccoli shippers now say that their product arrives in eastern markets from 24 to 48 hours after similar produce started from California at the same time. Such a handicap has been an important factor causing a great fluctuation in acreage and has prevented any expansion in Douglas County—419 cars.

Douglas County now has 70,000 turkeys and is the banner turkey county in Oregon. Dealers' estimates place (199) 1927 ship-
109 ments at 20 cars with prospects for a 25 per cent increase for 1928, 50 per cent of which, it is estimated, goes east, or 10 carloads.

From feed grains: The poultry business has undergone rapid expansion in Douglas County, as elsewhere in western Oregon. We have accounted for this tonnage in the Lane County estimates. There is, however, now under way a move on foot to establish an egg assembling and grading plant at Roseburg, so we have excluded, so far as egg tonnage is concerned, any figures for Douglas County, including that in the Lane County figure.

Also we have excluded any incoming tonnage on corn from Douglas County. The data gathered from dealers in Douglas County shows that 90 cars of corn were imported in 1927. This is an increase from 26 cars in 1924 or 288 per cent. This is also accounted for in the Lane County figure.

From mixed feed: Grain dealers' estimates show increase in sales of mixed feeds and grain from 50 to 200 per cent since 1924. In 1924, 172 carloads of such feeds were imported. Estimating a 50 per cent increase, the present tonnage would be 258 cars, or 7,740 tons. There is a tendency to mill various feeds in local plants at Roseburg from grain which is shipped in. This naturally would (200) increase the demand for eastern Oregon grain. We estimate that 50 per cent of this total feed tonnage would come via the cross State or 155 carloads.

Between 30 and 50 carloads of potatoes are imported into Douglas County, Oregon, annually, largely from Washington and Idaho points. This would come, if the cross State be constructed, from producing districts in eastern Oregon, 35 cars.

There are 2,000 cows in the lower Umpqua and Smith River. Smith River is tributary to Reedsport. Conditions are simi-
110 lar to those in Coos and Tillamook Counties. The land is worth more for pasturage than for hay. One thousand dairy cows would use one ton of alfalfa per year, that could be purchased at a lower cost. We estimate 68 cars coming via the cross State or total, with the present tonnage, of 969 cars. In arriving at one ton and a half to put a cow through the winter, we assume, of course, that that was only a small portion of the total annual feed needed for each cow. Eight months' pasture is very good pasture season in the coast country. It will take about two tons of hay to get a cow through the other four months' period. (201.)

Potential tonnage in Douglas County:

Pear shipments have increased 27 per cent since 1924. Many new orchards of late varieties are coming into bearing, and the old orchards which have been top-worked to better varieties are beginning to produce. Many growers estimate a 100 per cent increase for eastern shipment within the next five years. With the same rate of increase that has prevailed between 1926 and 1927, there would be a 50 per cent increase within five years, 17 cars.

By "top-worked" I means there was a rather large planting of pears in Douglas County of wrong varieties and they are now grafting the tops of those trees to improve late varieties, which largely go east.

Dried prunes: We would expect a 15 per cent increase within five years, based on the U. S. Bureau of Economics study, 13 cars.

Canned fruits and vegetables: Cannerymen's estimates indicate a twenty per cent annual increased pack, or one hundred per cent within five years. Reducing this to 50 per cent for conservativeness, we have 23 cars. (202.)

111 Broccoli: With improved transportation, enabling Douglas County to compete with California on equal terms, shipments should increase one hundred per cent, or 419 cars. Douglas County actually has shipped as high as 957 cars in one year. She would be getting back to about what they have already shipped their peak year.

From feed grains: At the prevailing rate of expansion in poultry and other livestock, the use of imported feed grains should increase fifty per cent in the next five years as it has in the past three years, or 77 cars, making a total potential tonnage of 549 cars, and the total within five years of 1,518. In my figures I have included those commodities which are produced there and find an outlet in eastern markets, assuming that it moved via the cross-State, because that is the shorter route. I based that data upon what speakers told me the markets they were actually shipping this stuff at the present time.

Linn County is a typical Willamette Valley County (203) has an area of 1,445,000 acres, of which 32.3 per cent is in farms. There are 3,300 farms in the county, an increase from 3,041 in 1920.

There is $35,787,000 invested in the agricultural industry. The major sources of agricultural income are from production of general farm crops, such as wheat, cloverseed, grass feed, vetch feed, livestock, dairy, poultry, fruits, and nuts. In cloverseed there are 15,034 acres of clover, from which there is produced an average of
112 420,000 pounds of seed annually for export. Dealers' records indicate that 35 per cent of this goes east via rail, or five cars. From small seed crops, including rye grass, there are 1,400 tons exported annually, according to local buyers, of which 20 per cent goes east via rail, or 18 cars.

From apples: There are 317 acres of apples, producing 43,684 bushels in 1926, an average annual pack of four cars.

Pears: Four cars.

Prunes: There are 2,394 acres of prunes, which produce an average annual crop of a thousand pounds per acre; 53 per cent goes east via rail, or 25 cars.

Cherries: There are 200 tons of fresh cherries that were purchased in Linn County in 1927 for shipment east, or 20 cars.

Strawberries: 1,200 acres of strawberries in the (204) county. In 1927, 7,000 barrels, of 500 pounds, packed, and indications are that this pack was increased this year—87 cars.

Walnuts, which is an expanding industry in the county, one car.

Canned fruits and vegetables: The total cannery pack in the county is 169,700 cases, an increase of twenty-one per cent over the year previous. Forty per cent of the pack goes east via rail.
113 One cannery has doubled its production each year during the past two years and expects to double last year's production this year. Sixty cars. From imports of feed grains and prepared feeds: Dealers' estimates indicate that 5,000 tons of feeds are imported annually—50 per cent of this would come via the cross State or 100 cars making a total present tonnage of 324 cars.

Potential agricultural tonnage in Linn County: The late pear acreage is just now coming into bearing—100 per cent increase is estimated within five years, four cars.

Dried prunes: Increase, 4 cars.

Walnuts: One car.

Canned fruits: Expansion of the cannery business has been several hundred per cent during the past two years. While it isn't expected that this rate will continue indefinitely, a 50 per cent expansion within five years is reasonable, or 30 cars.

Of imports between 1920 and 1925 there was 23 per cent increase (205) in sheep in Linn County, 22 per cent increase in poultry, 4.3 per cent increase in dairy cows. A similar increase can be expected the next five years, which should increase all imports 20 per cent, or 20 cars, making a total potential tonnage of 59 cars, and total within five years of 383.

Benton County: There are 1,369 farms in Benton County, which are located in the central portion of the Willamette Valley. These

farms comprise 214,558 acres, and represent an investment of $16,450,000. The major sources of agricultural income are from the production of wheat, vetch, clover, and grass seed crops, livestock, livestock products, dairying, fruit and nut production, and poultry, which is a growing industry, and there has been a constant increase in the number of farms since 1910. At that time there
114 were 1,098 farms. This increase in the number of farms is constant with the trend in agriculture toward more intensified production, including small fruits, poultry, and production of vegetable crops.

Clover and vetch seed: Four thousand acres of clover. From this acreage there are produced on an average of six carloads of seed or 90 tons. Dealers' estimates indicate that 35 per cent of this goes via rail to points east of Portland, or two cars.

From apples: 85 cars. (206.) Pears, there are 156 acres. Shipments from this acreage have increased from ten cars in 1924 to 33 cars in 1927. About 50 per cent of the pear crop consists of late varieties which go to eastern markets. Production of these varieties should increase at the rate of 20 per cent per year during the next five years, 12 cars.

Dried prunes: There are 1,000 acres producing prunes, which on an average yield a thousand pounds of dried prunes per acre—53 per cent moves east via rail, or 10 cars. Canned goods and vegetables: The cannery pack for 1927 was 44,368 cases, slightly less than 1926. The cannery records show that for the two years '26 and '27, 72 per cent of the production moved by rail to points east of Ogden, 30 cars. Dealers' records show that approximately 250 carloads of feed grains and prepared feeds are imported annually to Benton County, exclusive of corn. This represents an increase of 25 per cent since 1924. 50 per cent of this tonnage should come via the cross-State line in the form of cheaper feed grains from the irrigated valleys, or 100 cars.

Potential tonnage: Figuring one hundred per cent increase in pears due to bringing into bearing of the late varieties (207), 12 cars. Dried prunes: One car. Estimating a 25 per cent increase in cannery pack in five years would be eight cars. The increase in feed imports, 77 cars, a total potential tonnage of 28 cars in five
115 years. A total tonnage within five years of 267 cars.

Lincoln County: Like other Oregon counties bordering the Pacific Ocean, agriculturally it is largely developed to dairying, sheep, and goat raising. In common with other coast counties, hay is produced with difficulty. Bringing eastern Oregon alfalfa hay closer to the territory should cause it to use hay in the same proportion that Tillamook now uses it. Seventy-five per cent of the dairy cattle of Lincoln County are tributary to the Southern Pacific branch at Toledo. One-half of 3,504 cows, or 1,750 cows, would require one ton of alfalfa hay per year, a total present tonnage of 116 cars of alfalfa. The use of alfalfa would release 876 acres for

pasture which is now utilized for hay, thus increasing the cow population by 876, which would likewise require one ton per head of alfalfa, or 58 cars. The idea which I have suggested as a potential factor is the basis for the dairy industry in Tillamook County. (208.) They have found it more profitable to ship in hay and utilize the land for pasture. That practice is spreading to other coast counties and will continue if they can get hay as cheaply as Tillamook gets it. The cross-State line will shorten materially the length of haul for hay from eastern Oregon counties. The total within five years from importation of alfalfa via the cross State would be 200 cars. (209.)

Coos and Curry Counties: There are 1,551 farms in Coos and Curry Counties, located in southwestern Oregon. These farms comprise 285,986 acres and represent an investment of $16,078,834. The major income is from dairying, there being 14,420 producing cows in the two counties. These cattle, sheep, hogs, goats, and poultry, small fruit and vegetable crops constitute minor agricultural enterprises; 1,904 tons of cheese and 519 tons of butter were produced in 1927. Hay is produced and cured with difficulty for dairy
116 cattle. Approximately 2,500 tons of hay are now imported annually. One-half of the dairy cattle, or 7,210 cows, would use one ton per head if eastern Oregon alfalfa were available at a lower cost, which would be the case if the proposed line were constructed, providing 480 cars. A survey among feed dealers indicates that they now buy shipped-in grains and other concentrates to the extent of 4,469 tons, one-half of which, it is estimated, would come over the proposed line from Malheur, Harney, and Lake Counties and points east of there, or 89 cars. The annual pack of fruits in Coos County is 10,000 cases, or 215 tons, of which 50 per cent, it is estimated, would go East, or 3 cars; with a total present tonnage of 572 cars. Potential tonnage: Shipping in of 7,260 tons of alfalfa hay would release 3,630 acres of land. (210.) Importation of this alfalfa hay would release 3,630 acres of land, which is more valuable for pasture than for hay, and should support a cow per acre and would require 3,630 additional tons at one ton per acre, 240 cars. Broccoli has been successfully grown in the Coos Bay region, beyond any possibility of doubt the production of broccoli is a success there, and the shorter route to the East over which this commodity could be shipped should increase the production of broccoli that should go to eastern markets approximately 150 cars annually. Likewise lettuce has been successfully grown in Coos County. Climatic conditions are such that it does well there and should provide 50 cars for eastern shipment.

Canned fruits and vegetables—an increase in the pack should provide 8 carloads. This is based on a 50 per cent (211) increase in the next five years. The increase in number of dairy cattle will be 25 per cent during the next five years, taking into con-
116½ sideration the utilization of alfalfa hay, making available a

greater area for pasturage purposes, making an increase in the feed demand of 35 per cent within five years, which would be 31 cars; total potential tonnage of 479, making a total from Coos County available within five years of 1,051 carloads.

Josephine County, pages 21 and 22: The following tonnage data on Josephine and Jackson Counties is submitted herewith not because any substantial portion of this tonnage is apt to move via the cross-State railroad if the Klamath Falls-Alturas line is constructed, but in case a railroad is constructed from Butte Falls approximately 65 miles east to a junction with a Bend-Klamath Falls line, then the route for agricultural tonnage originating in Josephine and Jackson Counties and moving to points east of Ogden would be via the proposed cross-State line. It is because of this possibility that this tonnage is herewith submitted, although prior to the construction of the Klamath Falls-Alturas line, no doubt some agricultural traffic, both export and import, would move via the cross-State line.

Now, people in Josephine and Jackson Counties are hopeful that some day, to tap their territory, there will be a line (212) extended from Butte Falls across to a junction with a Bend-Klamath Falls line. That is the only reason we have submitted the figures which you find on page 21. There were 69 carloads of feed imported into Josephine County in 1925, 91 cars during 1927, or an increase of 31 per cent. The summary for Josephine and Jackson counties is separately listed. The potential tonnage, when the Butte Falls line is completed, if it is, will give the annual average shipment of apples, 1924 to 1927, from Josephine County, 41 cars; 65 per cent moves to points east of Ogden, or 26 cars. Pears: Pear shipments increased from 28 cars in 1924 to 83 cars in 1927, an average annual shipment of 63 cars, of which 50 per cent moves east; 63 cars.

116¾ Bulbs: The acreage has grown from 30 acres producing 3 cars in 1927, to 250 acres with 20 cars in 1928. They expect an increase of 100 per cent within the next five years, which would make 40 cars. From feed grains and mill feeds: The imports of these feeds increased 31 per cent between 1925 and 1927. The same rate of increase is expected during the next five years, which (213) would be a total of 55 cars. Making total potential tonnage carloads of 275, of which we estimate 50 per cent would move via cross State in case the Butte Falls line were constructed, or 137 cars. On the same basis we have developed Jackson County figures on page 22. Fifty carloads of feed are now imported annually, according to dealers, which represents a 100 per cent increase since 1924. Jackson County is the banner pear producing county in Oregon, producing 2,811 carloads in 1927. The agricultural investment is $26,157,914, and the number of farms 2,142. A shorter route to the consuming markets where Jackson County pears now go, also a cooler route, would be of material value to this district. It would result in better handling conditions for the fruit. There are 6,693 acres of pear orchards, from which were produced in 1927,

2,811 carloads of pears, an increase from 2,016 in 1923, or 39 per cent. Of the 1927 production 624 cars went to canners along the coast and the balance to markets east of Ogden. On the same basis of increase for the next five years as has prevailed during the past, the additional cars for Easterpn shipment would be 852, making a total for pear carloads available within five years of 3,038; apples 286, canned fruits 28; dried fruits 3; making a (214) total tonnage from Jackson County, carloads 3,355. Estimating that 50 per cent of this tonnage would move via the cross State, if the Butte Falls line is built, would be 1,703 carloads. This is summarized on page 23 of the exhibit. The total cars available at the present time are 5,928.

In my study I have included only agricultural products and have made no attempt whatever to include any other commodities that might move over the line. I have included just those com-
117 modities now produced in the county, applying to them the rate of increase that has taken place in the last few years, extending that over the next five years and estimating the traffic which (215) would move east or west over this proposed railroad, according to the logical markets as they now exist. I have excluded a whole lot of tonnage that might have been estimated. For instance, the settlement of 100,000 acres of irrigated land in Malheur County involves the shipping in of a great deal of farm machinery, building materials, furniture, a whole lot of additional tonnage that has not been taken into consideration; and the same thing would apply in Harney and Lake Counties to any irrigation development.

Exam. ROGERS. Is there a figure of 58 cars to be added to the total?

A. On wool? I gave you that. Yes; a net of 899 tons, 58 car lots. That would go in present tonnage column, now available.

Now the first table on page 24 shows the growth of the cannery industry in Oregon, 1919 to 1927, giving the cases packed of fruits and vegetables. It shows the tendency of production in western Oregon to be towards intensified type of crop, marketed through the cannery, commodities which find a market in the (216) Mid-west and East very largely. The total at the bottom of the page shows the increase in number of farms.

To explain the relation of the table at the top of the page to this cross-State line: The point is that there is an increase in the cannery pack in western Oregon. The bulk of this material, or of these commodities, must move East, and it would be a materal advantage if they went over a shorter route.

117½ I included in my preceding table by counties estimates which include these figures on page 24. This is really supporting data for what has preceded. It shows that there has been an extension in the cannery business and that this volume will increase over the cross-State line.

As to whom the advantage of movement over the shortest route would accrue: It would enable our packers to give better service to the purchasers of canned goods, getting a product to them on a quicker delivery. It might ultimately result in lower rates; I don't know about that. I am not making that suggestion at this
118 time. (217.) The benefit to packers would be in quicker service.

As to the decrease in the 1927 figure over 1926, in that year (1926) there was an overproduction of canned goods in the country as a whole and there was a slight curtailment in 1927; also there was a smaller pack because our crops here in the Willamette Valley were not as good as the previous year. Those two things combined caused a reduced pack in 1927. However, that figure will be exceeded this year considerably, from data we now have.

The table at the bottom of page 24 shows the tendency that is manifest in these counties west of the Cascades toward a more intensified agriculture and increase in the number of farms, brought about largely through the division of general farms. That means that more and more western Oregon agriculture will be devoted to intensified crops, vegetable production, fruit growing, nut production, poultry, which would find a market very largely in the East. Of course the shortest route here likewise to market those commodities would (218) be an advantage.

The total on page 25 is self-explanatory, showing the car lots of corn imported into Oregon, the figures being supplied by the State grain inspection department, actual inspections being made on grain here. This does not include all the corn that is imported, either. There is some corn shipped that goes by the inspection point, which originates in Nebraska and is shipped to the dealer direct without inspection. This corn is used for poultry feeds, mixture, and almost entirely in western Oregon.

The next table shows the car-lot shipments of perishable vegetables, exclusive of broccoli, from western Oregon, by products. Now in our data we included counties to be benefited in western Oregon, and Linn, Benton, and Lincoln, south of there, excluding the northern counties because from these counties there would be a shorter route via the proposed cross-State. By districts there in 1924, 399
119 cars were produced in the northern portion of the Willamette Valley of these perishable commodities, and only 14 (219) cars, or 3 per cent, in the district south. In 1927 the percentage was even more marked, 703 cars being produced in the district north, 5 cars in the southern district, or only seven-tenths per cent. I think the transportation has something to do with it. Now they do grow vegetables in Lane County in the vicinity of Eugene, in large quantities, but they convert them into canned goods rather than to ship them fresh. Climatic and soil conditions are not materially different from the northern Willamette Valley conditions and the southern Willamette Valley conditions. We believe that improved facilities

for shipping perishable commodities would have a definite tendency to increase the production of these commodities in the southern Willamette district. Fresh vegetables produce a much larger return per acre than do vegetables or fruits sold to the canneries.

On page 26 you see the car-lot shipments of eggs from California, Washington, and Oregon for 1926–27. California shipped 1,195 cars in 1925, Washington 943, and Oregon 152 cars. This shows substantial increase in the poultry business, indicated in our data throughout this presentation, which increase will (220) continue. Poultry business has increased more rapidly in the northern than the southern portion of the Willamette Valley. No doubt one of the reasons for it is being further away from the grading and centralizing plants. We believe this industry will be materially aided by a shorter route to eastern markets.

The table on page 27 shows distribution of dairy cows, poultry, hogs, and sheep, by counties, in these western Oregon counties. We have used these figures as a basis for our data on estimating the percentage of corn, for instance, that would be utilized in this territory and which would come via Eugene.

120 In this table I have included only the counties which I believe would be benefitted by the cross-State line.

At the bottom of page 27 is a statement relative to the savings to livestock shippers who are shipping from southwestern Idaho and southeastern Oregon to San Francisco markets. From Ontario, the center of the livestock producing territory of the region, to San Francisco, via existing routes is 1,328 miles, requiring three runs and two feeds if a special stock train is run; otherwise four runs and three feeds. I used Ogden as a gateway, as I remember. (221.) I did investigate, however, to determine what routes they were moving by at that time (last February). The shrinkage and feed cost on a car of 1,000-pound steers at 8 cents a pound, would be about as follows: Two feeds $17.50 a feed would be $35. You get three and one-half per cent shrinkage the first run of 400 miles, 1 per cent for each additional run, or a total of 5½ per cent, which costs the stock grower $110 or a total cost of $145. Now, the shrinkage and feed cost via the proposed route would be as follows: The distance from Ontario to San Francisco would be approximately 817 miles, which could be made in two runs and one feed, or a total cost of $170, a saving per car of $37.50 on 8-cent steers. Now these figures as to shrinkage, worked out as a result of an expensive survey among stock growers of the Northwest, are pretty well generally recognized as being about the average.

A similar saving would be made on sheep. I would correct that statement as to somewhat greater. I think on sheep it (222) would be about the same. Hogs probably a little less. In making this calculation I have only taken into account the distance and number of feeds. It would be important to take into consideration also the grades traversed, since downhill grades are worse than uphill grades

the way livestock or cattle are jammed around in shipment. I am not sure as to comparison of grades of the proposed with the existing route. I know the proposed line is fairly smooth running. The country is fairly level and there should be no long grades. Another point in this connection is the condition in which the cattle arrive in the market. It is difficult to ship from Ontario to San Francisco now. Start out with a steer in prime condition—when he arrives he is probably just good, choice, instead of being prime, and the shorter route would allow the stockmen of southern Idaho and southeastern Oregon to get their stock to the market in some condition of bloom and it should bring a better price in addition to lower cost or lower shrinkage. It is usually necessary for shippers to put their fat stock into feed lots again upon arrival at the (223) market to treat them largely as they would feeder stock to bring them up to good condition. They are either sold for slaughter or as feeders and sent out some place to be fed.

121

On page 29 you have the annual livestock slaughter in Los Angeles and Bay cities. We present this to show that there is a very large market for livestock in these places. As to whether these two markets would use the product of this section, the succeeding exhibits will indicate that, I believe. On page 30 is shown a substantial increase in the number of carlots between 1924 and 1926. Livestock is moving in substantial quantities from the territory referred to, to California markets even under the present circuitous route. It is my belief that these shipments would substantially increase via the direct route. I believe also in bringing this territory closer to California markets that in place of Nevada, Montana, and Utah shipping large quantities of sheep and beef cattle to California markets as they do now, it would bring us closer to those markets. They are closer to the Missouri Valley points, which we have to go right by them to reach. I feel that there would be a tendency for our northwest producers to utilize more and more the San Francisco and other California markets.

As to the increase in Oregon shipments between 1924 and '25, there has been a slight increase in the number of sheep in Oregon, particularly in the territory tributary to California and that probably would account for it. They have been getting up here in territory that they haven't been in before to get lambs, which is indicated this year, coming clear north up into the Heppner country. Between 1924 and '25 we have quite a substantial difference. (225.)

122

The next table shows the carloads of hogs into California by States of origin. You find that on page 31. You will notice there in that exhibit that 4,711 carloads of hogs come from Nebraska to California, from Idaho 425, from Oregon 3. As to Oregon's small number of cars shipped: Hog production is lower in Oregon than the requirements for the State itself and there would be very few cars for export. The development of irrigated lands, particularly in

Malheur County, include hog raising because of the large yields of corn there and the low cost of production, should provide hog tonnage with which to replace some of these shipments into California from other States farther east and farther distant from the California market. The table at the bottom of the page shows the carlot shipments of cattle into California by years, giving the States of origin; which again shows the volume of market and that the California market is increasing. It increased from 14,416 cars in 1922 to 19,170 cars in 1926, showing that as their population increases they must draw on sources outside the State to provide food for this increasing population.

Q. I note a substantial increase in shipments of livestock (226) from Idaho from 724 cars in 1922 to 1,632 cars in 1926. To 122½ what extent might those shipments be expected to move over the cross-State line?

A. Practically the bulk of that stuff that originates in ten southwest Idaho counties should go via the cross-State line. It would be a material advantage to them, if they go to California. They get a choice of north and south markets without increasing their distance.

On page 32 you see receipts of dressed poultry at Los Angeles by States of origin, showing that 25 per cent of it comes from California, 15 per cent from Idaho, 55 per cent from other States, 123 and 4 per cent from Oregon, showing plenty of leeway as to the increased shipments from these producing areas to California, so far as dressed poultry is concerned.

On page 33 you see the receipts of dressed poultry at San Francisco, showing that 45 per cent of the poultry received there comes from California, 14 per cent from Idaho, 6.8 per cent from Oregon, and 34.2 per cent from other States, indicating again that there is plenty of room to absorb the Oregon production. This poultry comes from such States as Illinois, Iowa, Kansas, Montana, Nebraska, and so forth.

The table at the bottom of the page shows the butter receipts at the San Francisco and Los Angeles markets for the year 1926, with points of origin: 58.8 per cent coming from California, 5.8 per cent from Oregon, 19.6 per cent from (227) Idaho, 15.8 per cent from other States. Here again is a commodity which we will produce on these irrigated lands in the eastern part of the State, the markets for which being to the west should move via this proposed line. This data shows that California is increasing its consumption of butter from outside States at the rate of 4.3 per cent per year, 1925 and '26 figures, or by 2,960,000 pounds per year.

The cheese receipts of the San Francisco and Los Angeles markets by States of origin show that 16.7 per cent comes from California, 22.8 per cent from Oregon, 26.5 per cent from Idaho, 33.8 per cent from other States; indicating again that there is a market there for increased dairy commodities to be supplied by sources closer to those sections.

On page 35 we show the increased consumption of fresh fruits or fresh vegetables, indicating that there is an increased consumption and an increased market in case transportation facilities are provided, which should enable the southern portion of western Oregon to go into this business. Carlot unloads of fresh vegetables, New
York, for instance, increased from 8,702 in 1917 to 20,164 in
124 1926, and the same increase prevailed in Chicago and Philadelphia. All these various factors have been taken into consideration in arriving at the estimates shown on page 23. (228.) And been given their proper weight. The real meat of the exhibit is in the summary.

In addition to the agricultural survey, I made a survey as to the growth of population which may be expected in the territory we are considering here. The thing that was outstanding was the increase in the consumption of agricultural commodities, the importation of agricultural commodities along the Pacific coast, particularly in California, where there has been an enormous increase in population. So the question arose in my mind what relation does this have to industrial development (229) and what part of the territory, the irrigated territory east of the Cascade Mountains, or does extension into California, have on the development of this Pacific coast country? I checked some figures on that question and found that in 1900, 46.4 per cent of the population of these Pacific Coast States resided in the cities; that by 1920, 62.4 per cent, in 20 years, resided in the cities; the agricultural population dropping from 53.6 per cent in 1900 to 37.6 per cent in 1920, and if present data were available it would show no doubt that more than two-thirds of the people in these States resided in cities. Now the population increase has been rapid during the 20-year period, 1900 to 1920; it was 130 per cent; while the urban population or city population increased 209 per cent. From 1900 to 1920 the rural population increased only 62 per cent, and this increase in the city population is greatest on or near the coast, where the increase in tillable acreage has been very small. From this
population study it shows that the great portion of our popu-
125 lation resides west of the Cascade Mountains along the coast,
and that if the rate of increase continues as it has during the past 20 years in the next 20 years, we will have 10 million people in these three Pacific Coast States, largely residing west of the Cascade Mountains (230) or its extension into California. In 1920, 77 per cent of the population resided west of the Cascades, only 23 per cent east. Now if this present growth continues and the division of population remains the same, 75 per cent of the 10 million people will reside west of the Cascade Mountains or 7,500,000. I think this indicates the need for a direct rail route from the food-producing areas, the irrigated areas east of the Cascades to the populated industrial districts west of the Cascades. Further study shows that the tillable area of land per capita in these States in 1900 was 7.9 acres; in 1920 it was 4.3 acres less than the average for the United

States, which is 5 acres per capita. Now between 1900 and 1910 improved land in these coast States increased only 18 per cent and between 1910 and 1920, 9 per cent. Between 1910 and 1920 less than two million acres of land were added, and of this less than 500,000 acres were west of the Cascades or its extension into California. Improved land in this territory increased 5 per cent, while population increased 40 per cent, as between 1910 and 1920. As already apparent, lands in this territory west of the Cascades are being used more and (231) more for the production of intensified crops, crops or enterprises which bring a higher return per acre, such as vegetables, truck crops, tree fruits, small fruits, and poultry. General farming is shrinking and will continue to shrink to smaller proportions, and the products it supplies will have to come, in a large measure, from the irrigated areas east of the Cascades. There is a unanimity of opinion that the coast is destined to be more and more industrial. One of the prerequisites of an industrial
126 center is an abundant, unfailing, relatively cheap food supply similar to that which the mid-west has. For the coast district this supply is found on the irrigated lands east of the Cascade Range. The manifestations during the past few years show that this territory is supplying food supplies in increased quantity for this increasing coast population. The proposed railroad is such a connecting link between the agricultural lands of the intermountain territory and the populous coast territory. It will shorten the route to consuming centers, and agricultural tonnage will move westward over it in increasing volume as the coast population employed in industry increases. As a result of this study, the basis of what has happened in the last 20 years will continue to happen in the next 20, increase in population, increase in industrial growth, it is apparent that a shorter route from the (232) producing areas of eastern Oregon to industrial regions of western Oregon is necessary if the development of Oregon is to be what we expect it to be. There is no reason to believe that the trend which has taken place in the last 20 years won't continue, particularly as trade develops with the Orient.

Now the actual figures as to population show that in 1900 there were 2,416,000 people in these three Pacific Coast States; in 1910, 4,192,000; in 1920, 5,566,000, and in 1927, 6,885,000, a 23 per cent increase in the last seven years. The 1927 are Bureau of Census figures. To go further and see if industrial growth was keeping pace with the increase in population, I obtained some figures from the Department of Commerce, which show that in Oregon between 1904 and 1923 wage earners increased 283 per cent and the value of manufactured products increased 555 per cent. In California also similar progress was made. Between 1904 and 1923 wage earners increased 154 per cent, and the value of manufactured products increased 502 per cent. Similar changes took place in Washington, although I haven't the figures. I have prepared a table

126½ from this data, showing the number of establishments, the manufacturing establishments in Oregon in 1904, 1909, 1914, 1919, and 1923, the number of wage earners and the value of products. The same for Eugene, Portland, and for California, and the
127 city of Los Angeles. (233.) This table shows commodities which irrigated lands produce, dairy products, potatoes, dressed poultry, beef, lamb, and hogs, will be produced in lesser quantities and this territory west of the Cascades will have to be supplied by the territory east of the Cascades on the irrigated lands.

(The statement above referred to was received in evidence, marked "Exhibit No. 2, Witness Teutsch.")

It is my judgment that there is no question but at the (234) present time there is a substantial need from the viewpoint of the agricultural development and the logical development of the State of Oregon, for a line of railroad substantially as proposed in the complaint in this case. The southeastern portion of Oregon can't develop unless it goes closer to the markets along the Pacific coast, and this railroad will provide that. I believe the urgent need will continue and increase as time goes on.

Commissioner McMANAMY. In view of the fact that the interveners are generally in support of the complaint, and their questions will be in the nature of direct examination, I think it would be well for the interveners to proceed with any questions they may have of this witness before the defendants proceed with the cross.

Mr. DUNCAN. Mr. Teutsch, in your examination as to the population statistics, did you segregate the increased population in the States of Washington, Oregon, and California to determine what the rate of increase in the past seven years has been in the three States?

A. I computed that. As I recall, it was 31 per cent in California (235), 13 per cent in Oregon, and 18 per cent in Washington.

Q. Did you make any study to determine why the rate of increase in Oregon is less than in the two States bordering it?

A. I didn't make any particular study as to that. I think transportation has something to do with it.

128 Q. Isn't it apparent from your examination into that subject that our slower growth is due to the lack of transportation facilities in the State?

A. There is no doubt but what that is one of the contributing factors.

(Cross-examination of Mr. Teutsch deferred until later in order to convenience out of town people who are anxious to testify and leave the city.) (236.)

JOHN G. MULLEN was thereupon called as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct examination:

I am an attorney and have resided at Nort Bend in Coos County, in the southwestern part of the State, for approximately 20 years,

during which time I have become familiar with the products and industries of Coos and Curry Counties to quite a large extent; and in a general way familiar with the transportation needs of that section. (237.) At this hearing I represent the county court of Coos County and the Coos County Chamber of Commerce, its membership consisting of the individual members in the Marshfield, Bandon, Myrtle Point. Coquille and North Bend Chambers of Commerce. Both the county court and chamber of commerce are interveners in this case. Coos and Curry Counties are the two southwestern counties in this State and they border on the west on the Pacific coast. Population, approximately 30,000. The main industries are lumbering, the manufacture of lumber products, dairying, fishing, and coal mining. Perhaps the best harbor between Portland and San Francisco is at Coos Bay in this district. About a year from now the Federal Government will (238) have finished the construction of jetties at a cost of over three million dollars. When this work is completed boats of any capacity can enter and leave under full load. The lumber is manufac-
129 tured, and during recent years there has been a considerable increase in what might be termed the remanufacturing business. Several veneer plants have begun operations. These plants manufacture to a large extent what is known as blanks for batteries, which are shipped to the automobile centers of the United States. The Venetian blind business—there are manufactories in that line in recent years. It is only within the past few years that there were any planing mills on Coos Bay, and that class of lumber is shipped to quite a large extent by rail, remanufactured lumber.

The deep-sea fishing industry, with the improvement of the harbor work, has increased very materially and will continue to increase with adequate transportation facilities east. Fishing boats that formerly went to the Columbia River and Seattle and San Francisco now do and can come to Coos Bay to unload fish caught in the ocean. Halibut and salmon are the kinds of fish mainly caught and shipped from that point. There are other kinds and varieties. (239.) As to the shipping fleet operating out of Coos Bay, there is a witness here who could give that information better than I can, but I would say that it has more than doubled and trebled in the last five years.

There are also vast quantities of wood suitable for pulp and paper purposes and while there is no pulp or paper mill as yet in southwestern Oregon, there are one or two prospective mills in sight.

The geology surveys of the United States show there are vast quantities of coal deposits in southwestern Oregon that are not being used to any very great extent. There is in process of organization a coal distillation plant to be located on Coos Bay, with a minimum capacity of 500 tons per day. If that should prove successful it would create a great deal of tonnage from southwestern Oregon.

It is estimated that there are approximately 30 billion feet of standing timber in the county, and I don't know what the estimate of Curry would be considerably less. A great deal of the timber
130 is owned by the Federal Government. There is a large percentage of it that is now matured and ready for market. (240.) I understand a large percentage is overripe and deteriorating for lack of being cut. To get a shorter and more direct route to the markets of the East and the Middle West and, if possible, competitive railroads in our territory is the primary interest of our community in this railroad construction plan. Our traffic now moves to eastern destination via the Southern Pacific which has its branch line from Eugene to Coos Bay and extending south from Coos Bay to Myrtle Point. That is our only railroad connection with the outside world. The branch of the Southern Pacific serves the entire county as much as one railroad through a county can serve. It runs to Powers by logging road. Powers is almost in the southern part of the county. It runs north and south fairly near to the coast, bordering the coast until it gets to Coos Bay and from there it has a tendency to go inland from Coquille. (241.) In the northern half of the county there are large areas on the eastern side of the county that are not reached by the Coos Bay branch. In the southern half of the county there is nothing on the coast. Curry County has no rail connection at all.

Our distance to eastern and middle western markets would be reduced over 400 miles by the line proposed in this case and something over 200 miles if the Alturas cut-off is completed. There has been only a slight development of our natural resources up to the present time. We have unlimited possibilities awaiting development; it is my opinion that this development would be fostered and aided substantially by a shorter route east and by the possibility of rail competition. (242.)

131 Cross-examination:

The Southern Pacific Company's Coos Bay branch has been in operation since 1916 and our community is served by it. In the past it has had the capacity for handling all the traffic offered from our section and more. I believe that we need more railroads because the proposed route would shorten the distance east. As to my statement that we want railroad competition, we hope that will result from the construction of this proposed line from Crane to Crescent Lake. (243.) I don't know that there is any definite plan for securing this competition; if the Union Pacific should build to Crescent Lake, it might find an outlet to the coast. We anticipate if the Union Pacific came across to Crescent Lake it might later extend over into Coos County.

I have made no investigation so that I am not in position to testify as to the percentage of lumber products that move by water and by rail. We believe that as the supply depletes in Michigan and Wis-

consin and Minnesota territory and the South—there will be a greater demand in the central part of the United States for our timber, which would then be shipped by rail. I understand that the Alturas line will be promptly constructed and our lumber shipments moving to the East by rail and taking that route would have only about 200 miles farther to move than they would over the cross-State line (244); this extra 200 miles isn't as serious with lumber as it would be with fish and perishable products. Lumber is our principal resource; outside of some fish business which we hope to develop, we expect to move in quantities from Coos and Curry Counties perishable products like broccoli, lettuce, small fruits. We have raised very little lettuce in that territory in the past for shipment, but experiments have been made and proven reasonably successful. I understand the climatic and soil conditions are considered favorable by producers. I understand broccoli experts have investigated and there is one reason why they favor that as a broccoli
132 territory (245), because it can produce at a season of the year when other broccoli producing territories like California and Douglas County haven't grown the matured plant. (246.)

(For convenience a map of Oregon was received in evidence and marked "Defendants' Exhibit 5.")

Q. And you understand, do you, that the line proposed is indicated on this map in solid yellow, extending from a point five miles west of Crane, on the so-called Oregon eastern branch of the Oregon-Washington Railroad & Navigation Company, and thence across the State, across the line of the Great Northern Railroad, and to a connection with the Southern Pacific, or Central Pacific line of the Southern Pacific, at Crescent Lake? You understand that location and that connection, do you? (247.)

A. Yes.

Q. Now, that connection is well up on the east slope of the Cascade Mountains—that is true, isn't it? Crescent Lake?

A. I think so; yes.

Q. Yes. So to proceed to your country it would be necessary to climb the Cascade Range somewhere, wouldn't it, in some manner, if the Oregon-Washington Railroad & Navigation Company is to proceed into that territory?

A. Yes, sir.

Q. Now, after it has done so, and assuming that it does reach Eugene or some other point—no, after it has done so, what would be its objective intervening between Coos County and Crescent Lake? Have you any notion on that, what route you have in mind?

A. None whatever, unless the old so-called Harriman survey.

Q. Well, the old so-called Harriman survey, known as the Oregon Eastern Railway, extended from Natron, near Eugene, clear
133 across the State to Ontario Junction, at Ontario. Now, it was cut in two by the decision divesting the Southern Pacific—its control was cut in two by the requirement that the Union

Pacific divest itself of its Southern Pacific stock holdings; you understand that?

A. Yes. (248.)

Q. And that left this line terminating, this line of the Oregon-Washington Railroad & Navigation Company, at Odell Junction. Now, it is projected on west some thirteen or fourteen miles to Crescent Lake, and I understand you to say that your country is interested in competitive operation, is that true?

A. It is.

Q. Now, you don't get a competitive operation if the line terminates at Crescent Lake, do you?

A. Unless you come in under common user over the Southern Pacific lines.

Q. Well, if the Southern Pacific would extend common user privileges there would be ample railroad constructed from Crescent Lake clear around to Marshfield, wouldn't there?

A. Yes, sir.

Q. That is a very expensive construction, isn't it, most of the way?

A. I would judge it is.

Q. Yes; and any other route whereby the Oregon-Washington Railroad & Navigation Company could reach Coos or Curry would be very expensive in construction, wouldn't it?

A. I would think so, most of it. (249.) It is rough country and it would be necessary to climb the Cascade Mountains and again climb the Coast Range of mountains; we are west of the range; we are on the coast. The line terminating at Crescent Lake would serve Coos County or Curry County only by transfer of freight from the Southern Pacific at the junction to the cross-State road.

134

Q. Well, now, how far is it from Curry County, down here at Gold Beach, say, at the mouth of the Rogue, how far would it be by any route to get up here to Crescent Lake, where this line connects with the Southern Pacific?

A. I don't think it logical for a railroad to build clear down to Gold Beach. It is about a hundred miles from Gold Beach to Coos Bay over the traveled road. (250.) I think it is 122 miles from Marshfield, on Coos Bay via the Southern Pacifiic, to Eugene. I don't know how far it is from Eugene to Crescent Lake.

Q. About another hundred miles. Now, there would be 322 miles. Now, your country, Curry and Coos Counties, enjoy for their greatest resource lumber, don't they?

A. They do.

Q. And you are the biggest offshore shippers of any manufacturing location in the State, isn't that true, of lumber, at Marshfield?

A. We are large shippers, but I wouldn't say we are the largest. We do not ship practically all mill products by water. The veneer

plants ship largely by rail. (251.) We ship some lumber as lumber both by water and by rail.

Our agricultural area is very limited but it is very productive; they are bottom lands on the rivers and various sloughs. According to Government agricultural census of 1925, Coos County has 21,017 acres and Curry, 7,015.

Q. Now, you wouldn't expect a big major railroad construction for a limited agricultural operation of that kind, would you?

A. That will be greatly increased.

Q. Well, can it be very greatly increased? You are lim-
135 ited (252) in your area there, are you not?

A. We are limited in our area. There is probably about a third of the available bottom lands that are now utilized, I would say. There are a lot of them not in agricultural use that won't need any diking or drainage.

Interchange would be a big help. Competitive service would be better. All of the cities on the Pacific coast that have competitive service have grown very rapidly, have gone ahead, while Coos Bay hasn't gone ahead very rapidly. (253.)

It is approximately correct that lumber goes over 400 miles out of direct line in order to get east now on the route it takes down to Roseville. I did know that during that time the Portland gateway has been open, with a joint rate with the Southern Pacific whereby they could ship from Marshfield through that route and east. I didn't know that to Granger, Wyo., with that line as it is, it is some hundred and forty odd miles shorter than the Klamath Falls-Alturas line. It probably isn't the shipper's fault that that route hasn't been used; it may be due to regulations of the carriers. The regulation I have in mind is that the Southern Pacific is the only road that is serving our territory. (254.) I don't know what the arrangements are between the Southern Pacific and the Union Pacific for the transfer from the Southern Pacific to the Union Pacific at Portland.

Q. (By Mr. SPENCER.) Now, if it turns out that the Oregon-Washington Railroad & Navigation Company concedes to the Southern Pacific 25 per cent of the entire rate to Missouri River if it will deliver lumber to it at Portland from the valley, which division exceeds to a considerable extent the local charge of the Southern Pacific, or the local rate, and you still haven't used that line, why should you expect that your shippers over there would use the cross-State line at Crescent Lake?

136 A. It would be somewhat shorter. I don't think a difference of 60 or 70 miles would cut very much figure in the movement of lumber to Chicago.

Q. And you would be just as bad off and just as much disappointed as anybody could be if this line was built across here from Harriman to Crescent Lake and stopped there indefinitely, wouldn't you?

A. I think that there are other matters, other commodities, that would use this besides lumber. It would make it possible (255) for the dairy men of Coos County to get the eastern Oregon feed, or grain and hay.

Q. Well, now, don't you know that western Oregon alfalfa is on the market for sale right now?

A. I don't think that it has been grown very successfully in southwestern Oregon. I have talked with the county agricultural agent.

Q. And you think that serious consideration should be given to the building of a line from Crane and Harney Valley in order that alfalfa might be moved into Coos Bay, where the total acreage in cultivation is twenty-one thousand?

A. I think that is one thing that would have considerable bearing. I couldn't tell you whether Oregon raises much alfalfa in the Rogue River Valley, on the Southern Pacific; I understand it raises alfalfa in large quantities in the Klamath Basin but that it doesn't raise it in sufficient quantities to supply the dairy men of Coos County in the Klamath Basin. Our county agent told me that. (256.)

Q. So that the lumber isn't of so much importance; it is just a question of getting some alfalfa over there to the dairy men of Coos County; is that the way you wish to be understood?

A. I wish to be understood that everything taken together, the dairying, the lumbering, and, as time goes on there is going to be more and more finished lumber for shipment east. Recently
137 there was opened in Marshfield a furniture factory, the first furniture factory in southwestern Oregon, and as the years come the lumber products are going to be manufactured into finished products that will increase vastly the rail shipments, rather than water shipments.

Redirect examination.

In addition to the lumber being shipped out as lumber, there are a great many specialty factories producing battery separators, and manufactured products of that kind, that do require expeditious transportation to eastern markets. Some of the specialty factories make specialties, like rulers and measuring sticks (257), and various wooden novelties; there are at least three small myrtle wood factories in the county that manufacture myrtle wood into what they term novelties and those are shipped various places. There must be four or five factories manufacturing battery separators. There are three at Marshfield, and I think there is a small one at Coquille, and there is one at Bandon. And there are box factories, or factories manufacturing box materials. Some of those plants make boxes out of veneering, battery boxes and boxes of that description, and we have a plant, not in operation now, that makes regular sawed boxes. These articles, especially the battery separators, are of high value. The matter of expeditious handling is an important consideration, because these products run about $8,000 a car (258) and the quicker

you can get that stuff to market and returns on it the better for the shipper, the owner.

It is our sincere hope that a line constructed as proposed in this complaint would eventually be extended through to the coast, to Coos Bay. In the meantime, we believe that the connection over the Natron cut off would provide a shorter route than we now have and would be a value to us and an aid in developing our port. (259.)

137½ C. F. MAGINNIS was thereupon produced as a witness on behalf of complainant and, having been first duly sworn, testified as follows:

Direct examination:

I am port manager and engineer of the Port of Coos Bay. I have been in that position nearly a year. I reside at Marshfield. I am familiar with the Port of Coos Bay. I have prepared a statement to read into this record outlining the port facilities. It so happens that I wrote an article, which was published last week in the Coos Bay Times, on this subject. That article concisely describes the Port of Coos Bay and its facilities. It is a concise report (260) and I will read it:

"Following is an extract from the report of Major General Edgar Jadwin, chief of engineers, made to the Secretary of War, December 10, 1927:

"'The area tributary to Coos Bay and the large expenditures which have been made by the Federal Government for harbor improvement have made Coos Bay the most important harbor between the mouth of the Columbia River and the waters of San Francisco Bay.'"

138 "Coos Bay is 365 miles north from San Francisco and 300 miles south, by water, from Portland. It is therefore practically equidistant from those two great ports. Aside from the importance of its geographic location, which alone warrants greater expenditure of funds than will prove necessary to its ultimate development, it is endowed by nature with other peculiar advantages which make it responsive to the works of man and insure its purpose as an artery of the Nation's domestic and foreign trade.

"The entrance to Coos Bay is a single range (or course) which is at right angles to the seas—when seas make during rough weather. The distance from the inner harbor to 'deep water' at sea is short compared with other harbors. The jetties at the entrance, now nearing completion, are making deep water of this short space and are also effecting a width (261) of such deep water to limits which safeguard navigation over the 'bar.' Natural features of the coast line are prominent and form advantageous angles for the true orientation of a vessel about to cross in. An incoming vessel is in calm water immediately upon entering the port. There are good anchorage grounds outside, north of the entrance, and close to it. There

is good anchorage inside in the lower bay, capable of further
139 improvement at small cost. The inner channel carries a natural depth of more than 25 feet of mean lower low water throughout a large percentage of the distance from the upper bay to the bell buoy. Not an inconsiderable portion of the inner channel carries more than 30 feet. Our present project depth is 22 feet"—controlling depth—"at low water. The matter of increase to 25 feet and later, when conditions require, to 30 feet at mean lower low water, will not require a large expenditure of money.

"The average high tide, for the year, in the upper bay is 6 feet above mean lower low water. Extreme range of time about 10 feet. Not so great as to create velocity of tidal currents difficult to cope within the management of vessels, but great enough, by reason of the sufficient area of the bay and its arms, to produce a tidal volume effective in scouring the channel in its ebb and flow. The bay is not afflicted with shifting of shoals from one part to another, and Coos River, the only stream of importance entering the bay, does not (262) carry down for deposit an amount of silt sufficient to cause a high cost of dredging in channel maintenance.

"Coos Bay has responded in the past to each effort towards its improvement and has no physical defect or other fault of comparative importance which can act as a bar to its future development.

"The port is well equipped to handle lumber and other freight leaving or entering. Seven of its docks have rail connections. Three docks have warehouses for storage of public freight. Two are equipped with locomotive cranes. One, a private dock, has electric overhanging cranes for rapid handling of its lumber. One is provided with a shear leg derrick for handling extra heavy freight from vessel to dock or vice versa. In addition there are log dumps, pri-
vate and public, and booms where logs may be stored
140 at reasonable rates while awaiting shipment. Three oil companies have plants located on the water front. There are two foundaries with machine shops, numerous other machine shops and welding plants carrying men skilled in every kind of work and a shipyard where any kind of repairs or supplies may be secured.

"The port district owns one-half mile of water front between North Bend and Marshfield. Its dock is 1,100 feet long, is equipped with a locomotive crane and other handling devices, trackage for 70 freight cars, and a log dump with booms conveniently arranged with pockets and runways for storage of (263) 10,000,000 feet of logs. The port dock and booms are for the convenience of shippers operating outside of Coos Bay. Handling rates in effect for use of port facilities have been lower than at other Pacific coast ports, as it has been the policy of the port commission to offer every encouragement to shippers in order to assist them in meeting conditions of the lumber market during the last few years.

"It is estimated that there is 176,000,000,000 feet of timber in southwestern Oregon, 40 per cent of which is owned by the Fed-

eral Government; 55,000,000,000 feet, 20,000,000,000 feet of which is still in Government ownership, stands on territory directly tributary to Coos Bay. Our representatives at Wasington have succeeded in convincing the Government that the improvement of Coos Bay is good business since better shipping conditions reflect increased valuation of Government owned as well as private owned timber. This has been proven by the appreciation of the Government's holdings in Coos Bay district since the construction of the jetties began, and foreign markets have been opened to our industries. We are now assured of a further improvement to the harbor in the
141 removal of a reef in the lower bay, near Pigeon Point. This is the last step of major importance towards the development of the port. Its accomplishment will enable us to load foreign and east U. S. coast vessels to capacity and thus open greater market to our products at lesser costs. Better (264) shipping conditions will offer inducement to the building of other railroad lines into the district. Imports may be looked for as well as exports and we may offer the service of our port to shippers over an extended interior territory, as we will be able to show them that they can ship through Coos Bay to greater advantage than through other ports.

"There are available sites on the Bay for large or small industries seeking rail and water connections. A railroad on the east side would open a large expanse of territory and waterfront and offer additional sites. Future growth will not be limited by lack of space. The port commissioners have profited from the experience of other ports which discovered too late in their stage of development that docks and other structures were so located as to prevent the expansion of the waterways to meet changing conditions. We have successfully petitioned the War Department to set our harbor lines back to such extent as to provide ample area for fairways and future turning and anchorage basins. Coos Bay has all the possibilities of a great world harbor without the necessity, in comparison with the requirements of other harbors, of great expenditure of funds. We have the additional advantage that constant betterment of the bay adds to the value of Government timber in the port district and makes 'Uncle Sam' a partner in our enterprise. Each increase of $1.00 per thousand feet in timber directly tributary
142 to the (265) bay adds $20,000,000 valuation to Government holdings in that district. It is conservative to state that $1.00 increase per thousand feet has resulted from improved water conditions during the last five years. It may reasonably be expected that the Federal Government will continue to assist the development of Coos bay and share in her prosperity."

As to the width of the bar at the harbor entrance; the jetties being constructed now, and which will be completed by next July, are 2,100 feet apart, the north and south jetties. The south jetty extends 4,300 feet out from Coos Head, the cape at the south of the entrance and the north jetty is longer, but the two jetties go to the same dis-

tance seaward. As to the number of miles of shore line available for docks and other harbor facilities: There are at present established by the Government approximately 10 miles in the upper bay only. This could be doubled and is arranged for future extension without going out of the upper bay district into any of the inlets or Coos River or without considering what we call the lower bay down near Empire. It would be possible to increase the mileage for dock space and industries to 50 or 60 miles, without including part of one side of the bay. (266.)

As to fog conditions on Coos Bay as compared with other Pacific coast ports: It is my understanding that the fog conditions are less than at some other ports and particularly less than San Francisco. It has been stated and not disputed that Coos Bay is closer to the Orient than any of the Pacific coast ports.

As to what statistics, if any, I have available, showing the cargo movement through the port of Coos Bay, I have listed here in this publication the names and number of vessels that have cleared for foreign or United States east coast ports since 1922, and in-
143 cluding 1927. Now it also shows the flag, the tonnage and the draft of vessels. I will describe briefly, in round numbers, the increase that has taken place in the shipping through Coos Bay over a period of years. Our foreign shipping really began the latter part of 1921. In 1922 there were 16 foreign vessels and 8 Atlantic coast vessels, carrying, respectively, 25,000,000 and 17,000,000 feet of lumber (267). In '23 there were 49 foreign vessels, 9 Atlantic coast vessels, carrying, respectively, 19,000,000 feet and 21,000,000 feet. In '24 there were 46 foreign and 14 Atlantic coast vessels, carrying, respectively, approximately 84,000,000 and 16,000,000. In '25 there were 37 foreign, 15 Atlantic coast vessels, carrying 64,000,000 and 19,000,000 feet, respectively. In '26, 40 foreign and 10 Atlantic coast vessels, carrying, respectively, 67,000,000 and 13,000,000 feet. In '27, 31 foreign and 9 Atlantic coast vessels carrying 63,000,000 and 10,000,000 feet, respectively. (268.) This year the number of vessels and their cargoes will exceed very considerably, last year. I haven't, however, any data on them, other than the fact that I know that we are getting more vessels in the harbor and they are taking good cargoes out. These cargoes move very largely to Japan and to Chile, Australia, China, and (269) I believe one cargo for England. I didn't state what proportion moved as lumber and what as logs or Jap squares. The figures I gave included the footage for logs and lumber.

(Said pamphlet, entitled "Coos Bay, Oregon," was thereupon received in evidence, and marked "Complainant's Exhibit No. 4, Witness Maginnis," and is forwarded herewith.)

Almost in every instance those boats come to Coos Bay empty; that applies particularly as to the foreign vessels. I wouldn't say that in regard to the U. S. east coast vessels. The coastwise
144 vessels and those operating between the Pacific and the At-

lantic coast do not always come empty; (270) sometimes they have a small cargo. As to whether we have in prospect any cargo which might be developed to load these empty ships, up to a recent action of the district engineer and the chief of engineers we were not able to load vessels to full capacity because there was an obstacle in the harbor which prevented their loading to sufficient depth. Until we got that out we didn't make any efforts to secure imports or to turn the freight from further east in this country towards Coos Bay, because we couldn't offer them any greater advantage at Coos Bay than they could secure at Portland or some other port, so there has been no attempt to secure incoming freight. Those difficulties have been taken care of. The last improvement of major importance that we will need is the removal of a reef in the lower bay at Pigeon Point, about 2 miles below Empire and that has been approved by the district engineer, the chief of engineers, the board of engineers, and by the rivers and harbors committee, but it has not yet been passed in the rivers and harbors (271) bill because the bill was not brought up at the last session of Congress.

As to the importance of the proposed construction of the east and west line to the development of Coos Bay, it could open up a new country in entering the bay proper, and open up new market to the products of the bay, a more direct market.

Q. Would the saving of 400 miles in distance to Middle West and eastern sections of the country be of any assistance in bringing cargoes from the Orient through your port?

A. I should say it would.

Q. Well, are there such cargoes to be developed, and that might be developed, with proper and direct rail transportation service through your port?

A. Certainly. It would tend to it.

144½ Q. Is there any reason why your port couldn't handle the cargoes of silk and other cargoes now moving from the Orient through other ports of the Pacific coast?

A. There is no reason why we shouldn't prepare to handle them if we could have as advantageous rail connections to ship them out of the district.

Q. Do you think that the providing of competitive rail (272) facilities at your ports will be of ultimate advantage, also?

A. Undoubtedly.

The Government will have spent in the vicinity of Coos Bay approximately six million dollars by the end of next July. In addition to that, the port has spent nearly one million. The figures I have given for the Government run back to about 1890. The present project of jetty work is costing three and a quarter million—it was begun in 1924 and will be completed next year. Outside of the entrance to Coos Bay there are no rocks, there is no menace to navigation for vessels bound either to the Orient or the north or the west, as a matter of fact, in any direction. (273.)

145 Cross-examination:

We have good railroad service. We have been unable to develop any tonnage because we have no peculiar advantage to offer. The large vessels that have been coming into Coos Bay up to the present time have had to go to some other port to finish off their load, so there wasn't any special reason why a foreign vessel would discharge its imports at Coos Bay and then go up to Portland or some port on the Columbia and finish off a load. I don't believe the Southern Pacific has maintained the same rates on all traffic from the east into Coos Bay that it maintains to Portland so very long. (274.)

A. I think that condition hasn't existed so long, has it?

Q. Since 1924? Four years?

A. Possibly as long as that.

Q. But even with that having been done for the purpose of stimulating some export business moving through the port there, no favorable result has been had?

A. We haven't any regular line running to Coos Bay. I mean we have no regular scheduled line of vessels coming from foreign ports to Coos Bay.

Q. The Southern Pacific is building a new railroad from Klamath Falls through Alturas to a connection with the Central Pacific in Nevada, and when it is finished, which we expect will be about next May, there will only be a difference of about 200 miles between that line and the line that is being asked for in this proceeding; and do you think the destiny of Coos Bay for the purpose of handling export and import business is going to turn upon that?

A. Upon a matter of 200 miles?

Q. Yes. (275.)

No; but I think the destiny of any port is dependent upon more than the service of one railroad for its ultimate development and

146 I believe the port of Coos Bay is going to be among the greatest ports on the West coast; I think the water conditions are there, or whether the cross-State line builds or whether any railroads are there or not that it would be possible to develop the water so as to handle vessels, but there would be no incentive to do so, and I don't believe that any great port is built without the service of more than one railroad in more than one direction, and I don't pretend to be any sort of railroad expert and I haven't really given this matter a great deal of study. (276.)

Q. (By Mr. SPENCER.) Why, captain, you mentioned the fact that there was considerable industrial frontage available on the west side of the bay for railroad development and service there, and accommodation of railroad facilities.

A. I don't know that I said that, but that is so.

Q. Well, I got that notion from your mention of the west side. Which side of the bay is now served by railroad?

A. The west side.

Q. If another railroad were to enter the Coos Bay country and Marshfield which side could it enter?

A. It could enter the east side. There is not a great deal of business there now. I would say that no port can expect or aspire to be a prominent port without the service of more than one railroad reaching in more than one direction.

Q. Now, you know that it is proposed to take this railroad (277) across the desert and stop it at a connection with the Southern Pacific from the easterly slope of the Cascade Mountains at a place called Crescent Lake. How will that assist in solving your problem over there, to obtain competitive service and bring you to that objective that you so much aspire to, to have service by more than one railroad?

A. It will be a step in that direction, will it not?

147 Q. You mean that we will have built half way across—and what do you mean by that?

A. When you have built half way across you will be that much closer to Coos Bay. We will invite you then to come on in.

Q. And you figure that if we get a hundred and ninety miles or so more of rail mileage exposed to the weather that we will come down into the coast range, where there is plenty of timber and moisture, is that it?

A. I hope you will. The Government has a lot of timber down there. They have been selling it right along. (278.)

Q. It is restricted in the cut so that the operation may be perpetual, is it not? An absolute, determined, fixed policy of the forestry department?

A. I really don't know.

Q. You don't know that? But you have heard, or know, or state, in any event, that the improvement of the facilities over there increased the value of the stumpage a dollar a thousand; is that right?

A. I stated that it is conservative to state that, yes.

Q. And would the building of another railroad in there add a dollar a thousand to that stumpage over there?

A. I didn't say so, but I believe that it would add to its value, probably, in a very substantial way. (279.) I have been actively administering the port and have conducted and carried on the loadings. There has been very little interchange between ship and rail.

Q. Now, I noted in the summary you dictated into the record from Exhibit 4 you have referred to the off-shore and to the intercoastal shipments, year by year, but following the recapitulation of same there appears coastwise shipments for the years '25, '26,

148 and '27. Those coastwise shipments constitute the large output of the Coos Bay mills, do they not?

A. Have up to date, as compared with foreign shipments by water and with intercoastal.

Q. And as compared with by rail—you know that, don't you?

A. I know that. But I haven't the figure on rail. (280.)

Q. Well, there haven't been so many cars over that they blinded you at all by number, have there, moving out? Over 90 per cent of your output is by water, isn't it?

A. I don't know.

Q. And, as a matter of fact, you wouldn't have to be an expert to know that a terminus over here at Crescent Lake, on the other side of the Cascade Mountains, which is 28 miles nearer your wharves than Portland, wouldn't serve you any better than a good railroad that is now operated on a water level grade from Coos Bay all the way to Portland, and from Portland all the way up to the Blue Mountains; isn't that reasonable?

A. You are assuming that that will be the permanent status of it, as you describe it now?

Q. Yes.

A. Well, probably that is reasonable, yes.

Q. And, as a matter of fact, your Portland connection would be infinitely better, because loads will come in there and the empties will be available there; that is true, isn't it? Sounds reasonable? Portland is the metropolis and the large center and the industrial center of this part of the country, isn't it?

A. Yes; the loads come in there in the cars hauled in by the railroads. (281.) They are made empty there. The empties are
149 used in shipping out. We wouldn't get any empties up there at Crescent Lake on a cold night that froze over. I came here to talk about the Port of Coos Bay. (282.) We have men more expert than I am to talk about the relation of Port of Coos Bay to a cross-State line.

Exam. ROGERS. Did you say that there was no interchange between rail and water at Coos Bay at the present time?

A. He said between ship and rail.

Exam. ROGERS. Yes; well, where do these vessels get their tonnage?

A. I took because he said from ship to rail, I took it that he was speaking of imports.

Exam. ROGERS. Well, was your answer confined to imports?

A. It was in that answer; yes. The tonnage came from the rail to ship. It came largely from Coos Bay. Some comes by water from Coquille River, around up out of the mouth of the Coquille and into Coos Bay. Some comes up from Port Oxford by water, but most of it comes (283) to Coos Bay by rail.

Q. (By Mr. DEY.) These mills there load direct from the mill onto the boat, don't they? The Coos Bay Lumber Company?

A. Yes.

Q. Which is by far the biggest one you have? Probably the biggest mill in Oregon?

A. Yes.

Q. And the other smaller mills do the same thing, do they not?

A. But the logs, the cedar logs, nearly all come into Coos Bay by rail.

Q. Yes.

150 A. They are unloaded at the port dock, or at another private dock, into the water, and then carried around to the side of the vessel and loaded overside.

Q. There is one thing you might give us some information on, captain, that would be helpful. How far back are they going now from Marshfield, or from the location of your principal mills, to get their logs?

A. They go quite a distance for cedar, cedar logs. Possibly as much as 15, or even 20 miles from the railroad. The cedar only. Not the fir. They are logging fir for the Coos Bay Lumber Company up around Powers now. I suppose it is 50 or 60 miles from the mill. (284.) I believe they haul it into their mill over their own railroad. They have some sort of an understanding with the Southern Pacific. I don't know what it is. The Southern Pacific uses that railroad for some service beyond Marshfield, but it is actually owned by the Coos Bay Lumber Company. The Southern Pacific does not enter Coos Bay over the rails of the lumber company. This is beyond Coos Bay from Eugene. (285.)

H. S. HALE was thereupon produced as a witness on behalf of complainants, and, having been first duly sworn, testified as follows:

Direct examination:

I reside at Coquille, in Coos County. I am county agricultural agent. I have held that position since a year ago in March. Previously I was engaged on the Smith-Hughes agricultural work for a while, and then going to school at O. A. C. before that. Before that on a farm in Clackamas County. As agricultural agent my work is in extension service; represents the U. S. Department

151 of Agriculture and Oregon State Agricultural College. I have made a study of the agricultural production of Coos County at the present time and its potential possibilities for production. My study discloses (286) as to Coos and Curry Counties together:

Coos and Curry Counties are located in the southwestern part of Oregon, and it will kind of be necessary to give you a little description of the climate to understand their agriculture. They have an annual rainfall of around sixty inches. Most of it comes during the winter months; practically no freezing weather; rarely ever have snow. Last year, I know, 29 was the lowest temperature in the winter. And the grass is green there, the cows on pasture through the entire winter. And the summers are rarely warm; this year, so far, 76 has been the hottest we have had. So with those conditions dairying and several other farm enterprises are the major enterprises.

Dairying: Dairying is the major enterprise at the present time. because of the pasture conditions that we have and the mild climate.

heavy production of forage crops. In Coos and Curry Counties at the present time, I estimate, there is around 15,000 dairy cows. According to the 1925 census there were 13,700, but there has been quite an increase since then, an increase that is going on rather rapidly. These 15,000 cows produce milk which went into 3,800,000 pounds of cheese in 1927, and 1,038,000 pounds of butter. (287.)

At the present time the big drawback, or the major requirement to further dairying in this coast section, is to get a cheap source of hay, or a cheaper supply than we have at the present time, and a more adequate supply. The hay that is harvested on the
152 farms in Coos County at the present time is of inferior quality compared with the alfalfa hay grown east of the mountains, because it is grass hay, and our weather conditions for curing hay are not ideal because of the dampness, foggy weather, and we don't have hot sunshine or drying weather. This hay that is cured there, as I say, is not good quality and is about half the value of the alfalfa properly cured and grown in the irrigated sections. Alfalfa is recognized as the best hay for dairy cattle, for the production of milk, and these irrigation projects in the eastern part of the State, or in the middle part of the State, can produce alfalfa and sell it at around 10 to 12 dollars on the cars, and, if we could get that into Coos Bay at from 16 to 20 dollars a ton, then the farmers could afford not to raise any hay at all, but use all of their land for pasture purposes, for which it is best suited. By using it for pasture they could—their gross income would be materially increased, because from our records of the cow-testing associations, of which we have three in Coos County, including close to 3,000 cows, the gross income per cow was $164.00 and approximately 90 per cent of that is (288) produced from pasture, because the cow is in pasture from in April until the latter part of October, and that is the season that the heavy production is on. The most of the cows, practically all of them, freshen in the latter part of February, March, April, and May, and during the winter months, or about six weeks to two months during the winter, December and January, are dry and do not require the feed at that time that they do when they are milking. About
90 per cent of this milk is produced while they are on pasture,
153 and 90 per cent out of the gross income of $164.00 is $147.60 which is produced from an acre of pasture, because we figure that one acre of pasture there will carry a cow, and under some circumstances we are pasturing two cows to the acre, but the average is, at the present time, one cow to the acre; but from hay the average production of hay is around three tons; which is valued at $12 for the grass hay, and the land that is used for hay is also used for pasture in the early spring and after the hay is cut off, so we figure that the pasture and the hay makes a total value received from that land of $78.00, compared with the value of $147.60 produced by the cow when she is on pasture there. By those figures it shows that using all of this

land for pasture, and not using it for hay, as is done at the present time, why, the dairy production could be increased, the number of cows could be increased by at least 3,750, figuring (289) that just half the dairymen adopt this policy, and it is the opinion of most of the dairymen in the coast section if they can buy hay, good alfalfa hay, at anything like a reasonable price they will not grow any hay of their own. At the present time the retail price for good alfalfa hay has been from $22.00 to $25.00 a ton. Some of that comes from Stanfield on the Union Pacific, along the Columbia River. And some comes from Klamath Falls, some comes from southern Oregon, and a little from the Willamette Valley. There is an adequate supply available at nearby points in the Willamette Valley, or in the Klamath territory, at the price it is selling. The larger the supply, naturally, the cheaper the price would be.

154 I do not know the extent to which alfalfa is produced in the Willamette Valley and in Klamath County. But I know the dairymen—and tests have (290) proven the same—that hay produced in the Willamette Valley is inferior to hay produced in eastern Oregon. The dairyman will pay four or five dollars more a ton for that hay than he will for the Willamette Valley hay.

If the line were built, it should reduce the cost of hay, because it will open up a new field, new source of supply. The Ochoco project was a failure, and one of the reasons was the lack of market for the hay. The greater supply, due to the increased acreage, would be one cause of decrease in the cost of hay, and the more direct route. The freight rate should not be as much as it is from Stanfield, and there is some hay shipped in from Stanfield at the present time. Some even comes from eastern Washington. Some comes from the Yakima district and even east of there, that alfalfa section; I forget the name of it.

I do not know the freight rates paid on shipments from the eastern Oregon and eastern Washington shipping points. (291.)

This using of hay from eastern Oregon and utilizing the pasture for dairying, or utilizing the land for pasture, would give us an increase of 3,750 acres for pasture, and, figuring a cow to the acre, it would give us that many more cows. And then, aside from this increase, there is a rapid increase due to increase in the carrying capacity of the pastures by new crops and better methods of seeding. We have the Lodino clover that is increasing the carrying capacity of the higher pastures, and Reeds canary grass for the lower

155 pastures. Either one of these crops will carry easily two cows to the acre.

Then there is in the neighborhood of three thousand acres of land going into drainage districts to be drained and diked, which is not being used at the present time. This will be a further increase. This land that is to be drained and diked is ideal land for canary grass. Reeds canary grass will carry, as I said before, two cows to the acre. Those 3,000 acres should, by buying hay from the out-

side, support 6,000 cows, which would, instead of giving Curry County at the present time (292) around 15,000 cows, it would make it nearer 25,000.

Q. You think such a result could be brought about largely by the construction of a line into the alfalfa districts of eastern and central Oregon?

A. The cheaper buying of hay should help to bring this about—and southwestern Idaho as well.

In addition to the hay requirements needed, we need to ship in from other sections of the country other feeds. Mill feeds and corn are being used in Coos County more than formerly, and used profitably. We have run several tests on them and find that they can make $3.00 for every dollar's worth of corn they feed the cows, up to a certain limit, and the corn can be used. There is need of corn there, and other mill feed to fatten off hogs that are raised on the by-products of dairying. We have the whey from cheese factories, skimmed milk where they separate, that is good feed for the growing of hogs, but not so good for fattening them off. Grain of mill feeds and corn are needed for fattening off the hogs and also for feeding the dairy cows to balance up the ratio and (293) supplement while they are on the pasture. High producing cows must
156 have grain to keep up the production, and this grain is not produced in Coos County; it must come from the outside. At the present time, I think, most of it comes from Portland. Some corn comes from Nebraska. I could not say where the other comes from.

The construction of a cross-State line would assist us in obtaining a greater or cheaper feed supply if it would reduce the rate, because the feed supply that we need is in southern Idaho, eastern Oregon, in Malheur County. Irrigation projects grow real good corn there, and, of course, the wheat land is over in that part of the world. Regardless of the question of rates, the proposed line would put us 400 miles closer to the most available feed supply for the types of feeds we need.

With reference to other agricultural products of my section of the State, there is a new industry being developed in the harvesting and selling of creeping bent grass seed. This seed is used for lawns and golf courses, and this year there will be in (294) the neighborhood of a thousand acres harvested, and it yields 200 pounds to the acre of seed. The seed sells for 90 cents to $1.50 a pound wholesale. There will be around 200,000 pounds of this seed available this year and sold, and, being an expensive seed, in the past it has been shipped mostly by express. The foremost of it has been used in California, but the eastern market is opening up for it. It has not been worked in the East; the market has not been opened up there. California has been using all the supply. So as soon as the California market is more supplied it will move to the eastern markets.

As to other products we produce, or could produce, that would move to the eastern markets—experiments have been conducted which have thoroughly proven that broccoli, lettuce, and green
157 peas can be profitably produced on the bottoms and bench land of Coos and Curry Counties, and these crops all must move to eastern markets and must have a direct route, and a quick route, in order to compete with other producing areas. We can produce these crops and get as large a yield, if not larger yields, than they can in the sections where they are grown at the present time, and also put them on the market when these other sections, such as Roseburg, are not producing. Because of the mild climate broccoli will (295) head in Coos and Curry Counties, with different varieties, from November, or even earlier than that, until up in April. All during that time we had broccoli last year heading. There are different strains of it that will head at those different times, and by developing these strains and producing them in larger quantities, why, there should be a market for them in the East, if we had a more direct route and one that would get them there quicker.

Then we have good conditions for the growing of vegetables and small fruits. We have good locations for canneries for canning peas. Berries grow naturally there. The evergreen blackberries grow wild all over the country, and there are tons and tons of it that could be harvested, and will be as soon as we get the canning facilities in there. And strawberries do exceptionally well, especially the Ettenburg or 121, which is the variety that is used for canning. Our climate and soil seem to be ideally fitted for the production of this berry. Then there are loganberries that produce heavier there than they do in the Willamette Valley. We have several fields that are producing in the neighborhood of four tons per year. And then there are huckleberries there to be canned,
158 and have been canned profitably. Small vegetables, such as carrots, beets, string beans, and several other vegetables similar to that, cabbage, do exceptionally well there and could be canned. And there are several canning concerns with their (296) eyes pointed in that direction that have been investigating. Whether they will locate there I can't say.

Then there is a poultry industry there that has been expanding. We have conditions somewhat similar to the famous Petaluma poultry conditions. We can produce green feed the entire year. Kale there is no danger of freezing, as there is in other sections. It is ideal poultry green feed. And eggs are at the present time being shipped direct to New York from our Pacific coast. If our poultry industry continues to develop, we will be shipping eggs out of there.

Then there is sheep industry and goats for the utilization of logged-off land that is on the rapid increase. Since 1925 we have 6,000 sheep in Coos County. There is around 10,000 in Curry County. And since that time the number of sheep has easily trebled.

There is around 18,00 0in Coos County alone. An dthis expansion is continuing.

There have been new methods developed of seeding logged-off land by the use of airplane in new grasses and clovers, and by the right pasture management of these lands they can be made into permanent pastures rather than growing back up into brush. On that large acreage of logged-off land, land to be logged off in Coos and Curry Counties, this should be one of the big industries of our section in a few more years. This land will support, when first seeded, around three sheep to the (297) acre, and later on it will not support quite as much but will always support one sheep to the acre.

159 That completes my discussion of the agricultural situation.

I said we had only 200,000 pounds of creeping bent grass seed. Some call it seaside bent. It is being contracted at 90 cents a pound this year. Before it has had some sale for as high as $2.00. Most of it has been shipped out by express before because of the value of it.

I am familiar with the estimates of available tonnage and potential tonnage from Coos and Curry Counties as set out in Exhibit No. 1, at page 20, as prepared by Mr. Teutsch. (298.) From my knowledge of Coos and Curry Counties and their agricultural production and possibilities I should say that those estimates as set forth on page 20 of Exhibit 1 are conservative. I have nothing further to add to my testimony.

Cross-examination:

Q. (By Mr. DEY.) Do I understand, Mr. Hale, that your pasture land down there, that all your available pasture land is stocked to capacity now, with the exception of that part that hay is raised upon?

A. All in condition for pasture. There is some that lacks drainage, that will be put in condition when it is drained. But practically all of the bottom land is utilized for pasture.

Q. In other words, there is no room for any more dairy farms down there?

A. Oh, yes; there is plenty of land yet to be cleared, slashed. (299.) There is 300 acres up Coos River cleared and ready for them to come in there and occupy. That has been diked and is now ready for use. And there is another farm right across the river, around 200 acres, that is ready for sale.

160 The average farm down there is around 60 acres. That would be an average dairy farm in the valley. Of course you get up the valley in small areas the farms are smaller. We have room for considerably more than eight or ten more dairy farms in there, that is, on the land that is now suitable for that purpose, that needs nothing more to be done to it. Our community has fared pretty well along that line. Our dairy industry has been good.

There has been no commercial production of broccoli for outside shipment. (300.)

Q. And the same is true of lettuce, is it?

A. Yes; lettuce has been shipped out, not by rail but by truck, to Willamette Valley and Portland vicinities.

All of these various small fruits and berries I have spoken of will be raised for purposes of canning in those counties. They will move out either by water or by rail in the form of manufactured products put up in cans.

Q. And those shipments that they move east will find available route, will they not, either over existing routes or over the so-called Alturas line which is being built, which will be reasonably satisfactory for that kind of product, would it not?

A. For the canned goods?

Q. Yes.

A. It would be more satisfactory than it would for the fresh vegetables and fruits. We have no intention of attempting to ship evergreen blackberries across the continent except in cans. They are very perishable, they don't ship very far. But broccoli and lettuce and green peas would carry. (301.)

We import very little alfalfa from California by water movement. Some comes into Bandon.

Q. Why don't you import more? You have got the water
161 route to move it up on and are so badly in need of it.

A. It is not available in California at the price that we can get it other places.

Q. Well, at which price have you got to have this alfalfa in order to make it profitable, in order to be able to use it profitably?

A. At the present price of butter fat we can pay $20.00 to $22.00 a ton.

Q. And you are paying now how much for that that moves down from the irrigation districts of eastern Oregon along the Union Pacific line?

A. $23.00 to $25.00. We import some at that price.

Q. But you have got to have it a couple of dollars cheaper before you can import more of it. Is that the idea?

A. It would be more profitable and more could utilize it.

I do not have the figures on the shipments in from Klamath Falls in the last two years, since the Natron cut-off has been in operation. (302.)

In mentioning some 15,000 head as being the total of the dairy cows in my district, I include Coos and Curry Counties in that estimate.

Q. Now you are speaking of the advantage that would accrue to the dairy areas over there if you could be relieved of raising hay and pasture at all. Now haven't you, at conferences with the farmers over there, been impressing upon them the importance and necessity of rotation, and that they will ruin their pasture if they pasture it too severely?

A. No, we have not in Coos County.

Q. Well, why do you say in Coos County?

A. Because the conditions are different there than they are in
162 other dairying sections—different than they are in the Willamette Valley. They are some different than Tillamook County.

Q. Well, haven't they impaired the grazing lands in Tillamook County a great deal by excessive pasturage, and aren't you doing it over there?

A. The pastures should be plowed up once in a while and reseeded. (303.) But if they are put into Lodino clover that is unnecessary; the longer it stays the better it gets. And so it is with canary grass. We have settings in canary grass that are 30 years old that have never been plowed, and it is better now than after it was seeded or at any time previous.

Paul V. Maris is director of extension at the Oregon Agricultural College, now known as Oregon State Agricultural College. He publishes a bulletin here for Coquille; it is a report of an agricultural economic conference at Coquille, Oregon, November, 1925. I know about that publication.

Q. Do you agree with this, reading from page 5: "There is an appreciable shortage of hay produced in the county for the dairymen. In 1924 this amounted to over 2,500 tons. In view of the recent development in vetch and alfalfa growing, this (304) shortage can doubtless be almost eliminated." Is that possible over there?

A. The policy has changed. That was in 1925. We have found that hay can be imported and land utilized for pasturage. Practice of the dairymen changed it. I did not come in there and change it; I am not capable.

Q. Now I notice at a convention down here, another publication of Mr. Maris, in December, 1925, in connection with the Columbia County economic conference. Did you attend that?

A. No, sir; I had nothing to do with that.

163 Q. He says, "It is not possible, under normal conditions, to feed twenty-dollar hay to cows and make a profit." You don't agree with that, do you?

A. It all depends on the cows. You see, they haven't been testing in Columbia County as long as we have. We have our cows up to a higher standard of production.

Q. Now do you think it is a good thing to move alfalfa hay several hundred miles when you have the hay production that you enjoy in western Oregon? (305.)

A. Where you can get better hay and at a reasonable price.

I am at the present time from Coos County. I was raised in the East. I have lived in Oregon, though, for ten years. I was in Clackamas and Douglas Counties. I was raised in Arkansas.

Q. Oh. Now has this condition changed? I read from the bulletin, another bulletin of Mr. Maris, of date February, 1926, report

of the Umatilla project, agricultural economic conference, Hermiston: "The demand for hay in western Oregon is steadily decreasing. A personal canvass of the leading dealers in the Willamette Valley shows that they are unanimous in declaring that they handle very little alfalfa now compared with the amount they sold five or six years ago. They say that where they used to handle it regularly they have a market for it now only in years of freeze-out or droughts." Is that condition as you understand it?

A. That is taking western Oregon as a whole, including the (306) Willamette Valley. Coast conditions are different.

Q. (By Mr. SPENCER.) Well, let's see. Now we will continue the next paragraph: "This situation is due to the enormous in-
164 crease of vetch, clover, and alfalfa hay in western Oregon. In 1925 the 19 western Oregon counties had 393,433 acres of hay, while in 1920 there were 327,841 acres. There has been no such corresponding increase in dairy cows and the increase is almost entirely in clover and in vetch which compete with alfalfa." The following figures indicate the decrease: Carloads into western Oregon in 1919, 302, and in 1924 and '25, the last year here, 2,100. I will not read the intervening years. Now do you agree with that?

A. As I said before, that includes western Oregon and the Willamette Valley, which is a large area compared with the coast section, and conditions in the coast section are entirely different. Hay production has not increased in those terms.

Q. There is no hay consumption on the coast section except over here in Coos Bay and about 30,000 acres down here in Tillamook County. Isn't that true? (307.)

A. Why, in Lincoln County there is some. There is a dairy country in Lincoln County along the Siuslaw River, in western Douglas County, western Lane County. They should need alfalfa in there too. They can get it right down here from the Rogue River Valley if the rates are right.

We have no prejudice in any of these coast counties against Umatilla County. We had just as soon have alfalfa from Umatilla County as from Malheur of the same quality.

I do not know whether Hermiston and Stanfield and Umatilla are the biggest hay-producing sections in the State, in alfalfa, or not. (308.) I know they produce alfalfa.

Q. Now I notice in this same Maris pamphlet here, from your Oregon State College, or Oregon Agricultural College, he
165 quotes the price per ton of alfalfa hay, that is in the stack, I assume at Hermiston, to the grower, in 1924, at $10.00, and in 1925 at $11.00. That says f. o. b. Hermiston on page 9. The rate from Hermiston to Marshfield is $6.50 a ton; the rate from Ontario and Vale on the cross-State line would be $6.80 a ton. Now why do you need the cross-State line for a little jag of hay to feed 15,000 cows?

A. We need the hay; it makes no difference where we get it. I don't think there is any excess hay produced in western Oregon

suitable for consumption by dairy cows. I don't think there is any shipped out. I could not say what the figures are for production.

I do not know how many dairy head there are in western Oregon. I can testify for Coos (309) County.

Redirect examination:

Q. (By Mr. Ellis.) Do I understand from your direct testimony there is a difference in the feeding value of the Willamette Valley hay, even the Willamette Valley or Rogue River Valley alfalfa, and that produced in the higher areas of central and eastern Oregon?

A. I do not know the comparison of Rogue River Valley and the Willamette Valley, but the comparison between Willamette Valley and eastern Oregon is about 20 per cent in favor of the eastern Oregon hay.

I am not familiar with the estimates of Mr. Teutsch for other than Coos or Curry Counties. (310.)

166 Recross-examination:

I do not wish to be understood as thinking that the estimate I referred to on page 20, that the Examiner inquired about, that that tonnage would go by the cross-State line.

Exam. ROGERS. I thought you agreed with Mr. Teutsch on his exhibit, in so far as it related to Coos and Curry Counties, and Mr. Teutsch, as I understood it, said this tonnage would move via the cross-State line?

A. That is the available tonnage that will be needed. That was my understanding of that, and as conditions are now there is no reason why it should not move by the east and west line. I think it would move by the east and west line.

Q. (By Mr. SPENCER.) Why do you think it would move by the east and west line instead of by the Southern Pacific, or via the Great Northern or via the Alturas route?

A. They are opening up all these new irrigation projects in (311) eastern and central Oregon. Those projects would be available and we would have a market.

Q. Have you made any study of the production of alfalfa in more accessible irrigation projects to determine whether that is probable at all?

A. Whether it is profitable to ship it from over there?

Q. Whether there will be any movement of alfalfa in here from the new one if there is not from the present one.

A. I don't see why it should not.

Q. Why don't they move it now?

A. As I said before, the Ochoco project was a failure principally because of a lack of a market for the alfalfa hay. I could not say that the Umatilla and Hermiston and Stanfield projects have been dragging for 20 years looking for markets; I am not familiar
167 with them. I could not say about Klamath Falls. (312.) I say I do line up hay for them, or put them in touch with

contractors. I don't buy it directly. I put them in touch with buyers in the Willamette Valley, and we have also told them of hay for sale in Klamath Falls district. I don't know whether they bought it or not; I could not say. There must be some hay down there at Klamath Falls. There is hay in Hermiston. There would be hay produced nearer Coos County than Ontario and Vale in eastern Oregon. There is now. (313.) We use some it and will use more.

Mr. DEARMOND. How about central Oregon, for instance the Crook County hay supply? If we get a cross-State line, it will be a lot nearer, will it not?

A. Yes, sir. I do not know whether there is an available supply there or not. I haven't been there. (314.)

SAMUEL L. NEWTON was therefor called as a witness on behalf of complainants, and having been duly sworn testified as follows:

Direct examination:

I hold the position of rate expert with the Public Utilities Commission of Idaho. I have been rate expert with that commission a little over five years. I was also about seven years with the Oregon Short Line, two and a half years in the auditor's office of the Mexican National Railway, in the city of Mexico.

Exhibit No. 5 was prepared by me. I think that this exhibit is really self-explanatory, and wish only to call your attention to some important points and (315) will explain some of the pur-
167 poses of some of the pages of this exhibit. The source of information is stated, I think, on the pages as we go along. The first page is from Form 1308 by the superintendent of car service of the Oregon Washington Railway. I should have said on file with the Public Utilities Commission of Idaho. It is the turnover by the Oregon Short Line Railroad to the Oregon-Washington Railroad & Navigation Company at Huntington. This is a westbound movement and shows an increasing demand for the various commodities listed by points west of Idaho, and we surmise largely coast points. The increase is noted at the bottom of the page, 1927 over 1921, of 10,666 cars.

Page 2. If you will, kindly correct the heading of column two. It reads now, "Originating on center line." It should read, "Originating on entire line." In carload traffic of the Oregon Short Line Railroad, I call your attention to the traffic originating in Idaho, and to the total movement. The Oregon Short Line Railroad did not include in their annual report traffic originating in Idaho until 1916. The amounts shown for 1914 were in response to special request. Amounts for 1913 and 1915 can not be ascertained, as records are destroyed by permission of the Interstate Commerce Commission. Note (316) that although figures for 1920 are higher, 1927 volume shows considerable increase over 1913 and 1914.

Page 3, San Francisco's imports. The exhibit does not state that these originated in the 10 southwestern counties of Idaho, but no

doubt most of the eggs, dressed poultry, and butter did. San Francisco purchased other commodities, but not in Idaho, and the exhibit shows that Idaho produced all of them except cucumbers. Cucumbers were produced but not shipped, but made into pickles at Nampa. The opening of more direct communication would,
169 we believe, enable Idaho to sell more of her products in San Francisco.

Mr. L. T. Wilcox, assistant freight traffic manager of the Union Pacific system, testified in a hearing before the Interstate Commerce Commission at Twin Falls, Idaho, docket No. 20,415, as recorded in the transcript of that hearing, at page 234: "A quicker service between the producing territory"—The transcript is not with me. I was present at Twin Falls.

Mr. SPENCER. I object to the reading of the transcript without having an opportunity to determine whether the (317) quotation reflects the real expression of the witness.

Comr. MCMANAMY. What was this transcript?

A. It was of a hearing at Twin Falls April 3rd, Public Utilities Commission of Idaho against Oregon Short Line Railroad Company and the Southern Pacific Railroad Company. I believe the quotations I read from it complete statements of fact. (318.) As far as I understand you to mean complete, it was a sentence that he uttered there at that time, and it is a complete statement of fact, if that is what you mean, I believe.

As recorded in the transcript of that hearing at page 234: "A quicker service between the producing territory and the consuming territory that sometimes has the effect of opening a new market, in fact it very frequently has the effect of opening a new market." (319.) That statement expresses my own views.

Page 4, carload shipments from 1921 to 1927, inclusive, from the 10 southwestern counties of Idaho. Adams County does not appear, as a shipment from Adams County was included, I believe, with
170 the shipments from Washington County, Adams County being served by the Pacific & Idaho Northern and freight originating on that road was turned over to the Oregon Short Line Railroad Company at Weiser.

Those are carload shipments. Note that while there is considerable variation, one year with another, the total for 1927 exceeds all other years except 1923.

Page 5, carload commodities shipped 1921 to 1927 from (320) the 10 southwestern counties of Idaho. On page 4 note the carload shipments from the counties, and page 5 shows the commodities that were shipped. I have not the destination; simply the production and shipment from those counties and the commodities that were shipped.

Pages 6 to 12 are the annual shipments of the carload commodities from each of the 10 southwestern counties of Idaho, which are summarized on page 4. It goes through each one of the years, 1927, 1926, back to 1921, at page 12.

Pages 13 and 14, total expended on highways of the different counties in Idaho, 10 southwestern counties, and the number of cars and trucks each year in those counties.

Pages 15 and 16, auto and truck registration in the 10 southwestern counties in Idaho, 1918 to 1927.

On page 17 I have stated that the increased registration does not fully show increase of automobiles. If, as United States Internal Revenue office figures, five years is the life of a car, then replacements in 1923 of cars in use in 1918 would be 8,194; in 1924, of the cars in use in 1919, 11,014; in 1925, of the cars in use in 1920, would be 14,495; in 1926, of the cars in use in 1921, would be 15,494; in 1927, of those in use in 1926, 16,581; a total replacement of 65,778. (321.)

171 The number of licenses in 1927 exceeds the number in 1918 by the difference between 26,439 and 8,194, or 18,245, or a total of new cars purchased of 84,023. I expect that the commission will be able to put on an automobile dealer who will be able to confirm these sales or state the correct number, if I have not come near it.

Page 17 states that the freight charges at an average of $150.00 per car would produce a revenue of $12,603,750 to the carriers.

Page 18, relationship of population, expenditure on highways and autos and trucks: Figures for 1920 and total for all years of amounts expended on roads. Notice that although the population increased 6,888, the autos and trucks increased 11,944, due, we believe, to improved roads. The per capita expended on roads seems to have had a direct influence on the automobiles and trucks for the number of persons. For instance, Adams and Valley Counties show no expenditures for 1920, and an auto or truck for each 11 and fraction persons but after expenditures as shown for 1927 there was an auto or trucks for each four and a fraction persons. The total for 1927 includes all the amounts for the years intervening between 1920 and 1927. It was not expended in that one year of 1927, but in the intervening years as well.

Page 19, gasoline sales for 1925, 1926, and 1927, as reported by the office of the Secretary of State. The data (322) shown on pages 13 and 19 may seem entirely irrelevant to the building of a railroad across central Oregon, but the pages of Exhibit No. 7 will explain the relation of these pages to a shorter line to San Francisco.

172 Mr. THOMPSON. I now ask to have Exhibit No. 5 for indentification admitted in evidence.

(The statement so offered, having been previously marked for indentification, was received in evidence as "Exhibit No. 5, Witness Newton.")

Mr. THOMPSON. I now ask to have this marked Exhibit No. 6 for identification.

(Said statement was thereupon marked "Exhibit No. 6, Witness Newton," for identification.)

I prepared Exhibit No. 6. In compiling the data relative to the carload shipments from the 10 southwestern counties of Idaho it was necessary to tabulate the shipments from each individual station on the (323) Oregon Short Line Railroad, Mountain Home and west. Unless some one would care to know the amount shipped from any particular station, I have no desire to call your attention to anything in this exhibit, as the shipments for the years and recapitulation have already been placed in the record by Exhibit No. 5.

Mr. THOMPSON. We ask that Exhibit No. 6 for identification be admitted.

(The statement so offered, having been previously marked for identification, was received in evidence as "Exhibit No. 6, Witness Newton.")

I have nothing in the record to show the destination of these cars.

Mr. THOMPSON. I ask to have this paper marked Exhibit No. 7 for identification.

173 (Said statement was thereupon marked "Exhibit No. 7, Witness Newton," for identification.)

Exhibit No. 7 was prepared by me. The exhibit shows that the towns mountain home and west bought on the north Pacific coast and around San Francisco (324) in 1927, as far as copies of reports by agents of receipts at the various stations were filed at the office of Joel L. Priest, general agent at Boise, show. Page 1 states that the record is not complete, and the reason being that some months were missing in the reports that I took from Mr. Priest's office. The month of August is entirely omitting of the shipments received at Boise, and I don't remember what others are missing but they were not all complete.

On page 2 I again call your attention of the increase of population, believing with more people, more would buy their needs of automobiles, gasoline, sugar, tea and other commodities which record shows were imported for their use.

On page 3 and other pages following you will notice routing. Where I have used the letters "O.-W. R. N.", it is to signify that the shipments moved via the Oregon-Washington Railroad & Navigation Company and all rail to the destination. Where the letters "SS" precede "O.-W. R. N." it shows that the shipment moved via steamer from California points and Oregon-Washington Railroad. The letters "RR" also are shown, indicating that the shipment moved all rail through Portland on to destination. The words "Ogden," "Salt Lake City," and "Wells" also appear in the routing, indicating that the shipment moved all rail through Ogden, or through Salt Lake City, or through Wells to destination shown.

174 You will find that fir lumber moved—I see (325) one here in Boise, Idaho, in the month of February, this second item; one Ogden, O.-W. R. N. It occurred to me that possibly by opening a railroad across central Oregon, that the fir timber which has been

spoken of as being west of the Cascades might possibly find a sale in Idaho and movement over this new road, which would be, we believe, an advantage to Idaho in having competitive points selling the same commodity.

You will notice also shipments by steamer from California points. Allowing three miles of water to one on land would place Portland 250 miles from San Francisco; adding 500 miles to Ontario would make 750 miles to San Francisco via Portland. The distance from Ontario via the new railroad I understand would be about 800 miles to San Francisco. Many shipments now sent by water might be sent all rail due to the shorter time of transportation, and surely the all-rail shipments now routed via Portland would go via the new and shorter route. As to the route via Ogden and Salt Lake City, the proposed road should get all of them and nearly all of those sent via Wells. Of the shipments to Boise from San Francisco points, around the bay there, as shown on pages 3 to 15, 68 were routed via Ogden, 10, via Salt Lake City, 5 via Wells, 134, via Portland and steamer, and 131 via Portland and all rail.

To Weiser, two went via Ogden, 43, Portland steamer, and 32, Portland all rail. (326.)

To Fayette, one, via Ogden, nine, Portland and steamer, 43, via Portland and all rail.

To Caldwell, 23, Portland and steamer, 56, Portland all rail.

To Murphy, 2, via Ogden.

175 To Emmett, 1, via Ogden, 14, Portland and steamer, and 5, Portland all rail.

To Parma, 2, via Ogden.

To Mountain Home, 1, via Wells, 2, Portland all rail.

To Nampa, 37, Portland and steamer, 48, Portland all rail.

There are a great many shipments of carloads of automobiles that went all rail. They were from Melrose, California; largely, to southwestern Idaho. I understand that the automobiles are manufactured in the East and shipped in a knocked-down condition to assembling plants, which have lately been established in California, and are put together there and shipped to the destinations as shown.

The advantage of the cross-State line (327) in shipping automobiles from Melrose, California, to southwestern Idaho, is that on account of the distance being shortened they would move quicker, I believe, in the transit of them. The purpose of the showing with respect to automobiles and the cross-State line is because automobiles are loaded in cars and move all rail, and on account of the shorter distance which would accrue over the proposed line, we believe that all of those automobiles would move via the shorter distance, the shorter route. Generally the dealer is anxious, I understand, to get the cars for sale so that they can have them as quickly as possible.

Exam. ROGERS. Well, does the number of automobiles in use now indicate the number of automobiles that will be shipped in in the future?

A. Why, the replacement on automobiles would indicate that there would be a good many, if, as stated on page 17 of Exhibit No. 5, the life of an automobile is considered as only five years, and I
176 know personally that many consider that they should turn in their car after they have used it one year on account of the depreciation and liability to need repairs, and purchase new cars. And it would indicate that there would be (328) replacement of the number that were in use five years previous. In 1927 I have estimated that on a five-year basis there would be a replacement of 16,541 cars in the 10 southwestern counties of Idaho. How true that is, not being an automobile dealer, I could not testify, but only on the supposition that the life of a car is five years and would need replacement in that time.

I selected the 10 counties listed on my early exhibits because they are situated in southwestern Idaho and would be those counties that would be particularly affected by the shortening of the distance over the proposed route. I included no counties that I did not believe would receive some special benefit from the (329) cross-State line.

(Said statement, having been previously marked for identification, was received in evidence as "Exhibit No. 7, Witness Newton.")

I have prepared an exhibit similar to the one which I have just explained, but showing the receipt of various commodities at stations on the Oregon Short Line within the State of Oregon.

This exhibit shows receipts from the north Pacific coast and from around San Francisco, by stations on the Oregon Short Line located in Oregon on the branch from Ontario to Brogan and Burns, and also one station on a branch line south of Huntington, Robinette station. The routing directions are the same where it moved
177 all rail by the Oregon-Washington, whether it moved by steamer from San Francisco or moved all rail or whether it came by the way of Ogden. And receipts from California points show that Nyssa received one car all rail (330) via Portland; Juntura, 1 car all rail via Portland; Burns, 10 cars all rail, via steamer, 4; via Ogden, 1; Robinette via steamer, 1; Vale via Portland, all rail, 10; Ontario, via Portland, all rail, 24; via steamer, 22; Crane, via Portland, all rail, 4.

I was just reading the summary. The exhibit shows on page 1, first, Nyssa, carloads received at Nyssa and farther down the page at Juntura, and then at Brogan. I see that Brogan got one car of black powder, all rail. On page 2, receipts at Burns, taking in also page 3. Page 4 is Robinette; page 5 is Vale; page 6 is Ontario, also continued on pages 7 and 8; page 9 has the receipts at Crane and at Harper.

Exam. ROGERS. Mr. Newton, these various exhibits leave the commission to exercise its judgment as to which of the shipments would be routed over this cross-State line, don't they? Have you got anything to help us on that?

A. I am taking the position, expressing the belief, that where it shows that the shipment moved all rail from California points, that such shipments and like shipments in the future would, on the completion of this cross-State Oregon railroad, move via the new line on account of the shorter distance. Where it shows all rail from California points they would (331) patronize the new line on account of the shorter distance. As to how it would move originating at San Francisco Bay, it would originate on the Southern Pacific. Moving all rail, as it does now to Portland, it would move via the Southern Pacific, and, we expect, would be turned over to
178 whatever road built across central Oregon, at Crescent Lake or the junction point. Instead of being routed the whole distance to Portland and then over the Oregon-Washington to destination, as it does now, it would take the shorter *t*oute on the completion of this road.

On traffic moving all rail from San Francisco to Ontario I think by the new line the distance would be about 800 miles, via the cross-State line. I believe the present distance is in the neighborhood of 1,200 miles. A saving of about 400 miles in the haul, from what I understand. (332.)

(Said statement so offered and received was marked "Exhibit No. 8, Witness Newton," and is forwarded herewith.)

Cross-examination:

Taking Exhibit 8 I don't contend that any of the traffic originating in western Washington, or in Portland, or in western Oregon north of Eugene, would reach Boise or any of these other southern Idaho cities via a cross-State line. I have only called your attention to the routing from San Francisco as probably moving over the new line.

As to Exhibit 7 a very considerable number of shipments from California moved via steamship to Portland and thence by rail to our southern Idaho city. There is a through rate, proportional rate there, water and rail. (333.) That arrangement very probably would continue, irrespective of how many railroads we had to San Francisco, although if there was any reason to have an expedited shipment it probably would move by the new line on account of the shorter time. That is all.

179 Our expedited shipments there, to expedite those shipments from southern Idaho, at the solicitation of the Government and all the officials up there and of the growers in those irrigation projects, after long petition and clamor and request, a line was built from Rogerson, the terminus of the Twin Falls branch, down to Wells, Nevada, connecting with the Southern Pacific, or Central Pacific. We feel that the line is not used to the extent that it should be, and therefore the Public Utilities Commission of Idaho, at the solicitation of people of Idaho, brought this case which I have

made reference to, 20415. We believe that the rates were too high over that line, is one reason it was not used as much as it should be. If the rates are properly adjusted, I believe that line would receive the patronage of southern Idaho counties that I have listed here. (334.) That is what we asked that hearing for. It might have more patronage over that shorter line.

The Western Pacific has been authorized by the Interstate Commerce Commission to expend a large sum of money to effect and accomplish a physical connection with the Wells-Rogerson line. I do not know whether work has started yet or not.

As to a good reason for southern Idaho to be asking for a line across the Oregon desert, when they have had this one constructed at their own petition and request, I think I explained one reason possibly, when I quoted Mr. Wilcox saying that quicker service between producing territory and consuming territory would have practically the (335) effect of giving Idaho a new market, and if the distance is shortened over that new line and it were closer to San Francisco, some of those products we raise and do not sell in San Francisco might possibly be sold there.

180 Exam. ROGERS. If this Western Pacific construction goes through how will the distance compare then?

A. Why, the connection the Western Pacific is making is at Wells. Now the connection there is only between the Oregon Short Line and the Southern Pacific. Both the Southern Pacific and the Western Pacific pass through Wells, and the Western Pacific is now making preparations to connect to the Oregon Short Line. The distance will be longer by the Western Pacific to San Francisco than it is by the Southern Pacific, but there are many points in Nevada and northern California, especially to California, that the Western Pacific reaches that the Southern Pacific does not. The Western Pacific makes no better connection than we have now at Wells via the Southern Pacific. We have a through route now via Wells (336) and the Southern Pacific to central and northern California.

Q. You don't suggest that southern Idaho products destined for Los Angeles should move via the Southern Pacific through central California, do you?

A. If the matter of distance was considered, and the Southern Pacific completed the broadening of the line from Tonopah Junction to Owenyo, the distance will be shorter to Los Angeles than it would by the way of Ogden from Twin Falls and counties west of there.

No one has made any complaint about the service of the Union Pacific. The Oregon Short Line is satisfactory from southern Idaho counties. It moves to Los Angeles via Salt Lake. (337.)

We hope we will have now, when the Western Pacific completes its connection at Wells, a competition on the Wells-Rogerson

181 line by the Southern Pacific and the Western Pacific for business in southern Idaho.

Q. And the Short Line turns it over to either one of them. Now, if there is any business to move there, don't you conceive that is the way it will move instead of taking the Oregon cross-State line?

A. Well, Mr. Spencer, it will right now, but after the completion of that cross-State line the distance is quite an item of consideration on perishable stuff, and there might be a whole lot of business that would find it better to go by the shorter route.

The Oregon Short Line is considered a very high-grade railroad, as far as construction and maintenance and equipment are concerned. I don't suppose the Burns line is comparable with the main line at all. I have never been over it. (388.)

As branch line construction, if such construction is made across Central Oregon we would expect, from our experience with the Union Pacific, that the Union Pacific, if they built the line, would make that part of the line just as good as any other portion of it.

As to whether the branch lines of the Oregon Short Line are as good as the main line, we would not consider that a branch line, making connection through to San Francisco that way.

Q. What is to become of the line from Wells to Rogerson, if you are going to build a line across there, to maintain it?

A. The Twin Falls people think they have a whole lot of tonnage they will originate under proper rates that will help out that Rogerson-Wells line.

Q. Well, they are limited in water supply. What is going
182 to happen over here, if you divert a good chunk of your traffic over a cross-State line, take all the northern and eastern traffic and put it down the Snake River Canyon, and the rest (339) of it down to Wells, Nevada, where is the O.-W. R. & N. going to have any place in the sun?

A. Why, Mr. Spencer, we are opening up new irrigation projects. We expect we will have enough to supply all of those roads. We hope so, anyway. We are very optimistic on that score.

The commission will have a witness, I think, who will explain as to what extent the irrigation projects are utilized now.

It seems to me this Rogerson-Wells cut-off was constructed in 1915, but I am not sure.

Q. To refresh your memory, isn't it a fact when we were hearing this case before in this court room four years ago that the Southern Pacific and Union Pacific constantly held before the commission the panacea that would be created by the construction of the Rogerson cut-off?

A. I remember now they were working on it, but it was not completed at that time. (340.) At the present time that cut-off has a train three times a week each way. There is passenger service over that cut-off only in connection, I believe, with a mixed train.

I could not say as to what effort has been made by the Oregon Short Line to develop and utilize the Rogerson-Wells cut-off to its fullest capacity. The rates were made from many points in

Idaho the same via Rogerson-Wells cut-off as they were by the way of Ogden. In the former case the Rogerson-Wells cut-off
183 and the service it would perform to southern Idaho was mentioned, I believe, several times constantly as the solution of all the problems for southwestern Idaho.

Redirect examination:

The Oregon Short Line division claims the Rogerson-Wells cut-off (341) as a branch line.

Q. Was the Rogerson-Wells cut-off constructed at the request of Idaho to serve all of southwestern Idaho, these 10 counties that you have discussed here, or was it designed mainly to serve, and does it mainly serve, the Twin Falls section, which you have not included in your exhibit, and points east of Twin Falls?

A. Well, I can't speak for the Oregon Short Line officials, but the people at Twin Falls and that vicinity have labored under the idea that that was built for their special accommodation. I know that.

I have not alluded to the Twin Falls district, or the district east of Twin Falls, in my exhibits.

I don't think I was present when Mr. Armstrong, chief engineer of the Oregon Short Line Railway, was on the stand, testifying in re that cut-off. I don't remember. (342.)

I have the comparison of distances from these 10 southwestern counties to San Francisco over the cross-State line as against the distance over the Rogerson-Wells cut-off calculated. I have them tabulated here. Payette, which is only a short distance from Ontario, would be 154 miles nearer San Francisco over this proposed line than it is now by the way of Wells.

Mountain Home is the most eastern point I have shown any shipments from, or any shipments to, and Mountain Home
184 would be nearer to San Francisco by the present route via Wells than it would by the proposed route. (343.) It would be 41 miles nearer San Francisco by the way of Wells than it is by the proposed route. The advantage as you go west from Mountain Home would accrue to the cross-State line, as compared to the Wells route.

PORTLAND, OREGON, *August 4, 1928.*

ANDY P. DAVIS was thereupon produced as a witness on behalf of complainants, and having been first duly sworn testified as follows:

Direct examination:

I reside in Marshfield. I am secretary of the chamber of commerce at present. I have held that position almost a year. I have resided in Marshfield and vicinity almost 19 years, with the exception of three years I was in Seattle during the war. Prior to becoming connected with the chamber of commerce I was the district supervisor for the Pacific Lumber Inspection Bureau, having charge of all of the inspection of lumber (345) on Coos Bay in that district. I

have compiled for the purpose of this record statistics showing shipments of lumber from Coos Bay over a period of years.

In 1922 there were shipped from Coos Bay 806 carloads; in 1923, 2,011 carloads; in 1924, 1,904 carloads; in 1925, 2,800 carloads; in 1926, 2,546 carloads. I didn't get 1927. I didn't have time to dig them out. I am familiar with the 1927 production in my community. 1927 will be, I think, perhaps a little less in rail shipments than in 1926, for this reason, that one mill down there that shipped (346) 427 carloads in 1926 is now closed, burned. The rail
185 shipments will not be more in 1927, in my opinion, than they were in 1926, because of this mill having burned. In my judgment it will not be materially different.

As to the present trend, during 1928, that mill is not running, but the other mills, I think, are shipping more than they did formerly by rail. I think 1926 is a safe guide or estimate for both 1927 and 1928. Other than the mill that burned, the several mills that are operating are doing a little larger business than they were during 1926. And the veneer plants are shipping, I believe, more than they did in '26 and '27. They seem to be running more overtime than they did in those years, and for that reason I believe that they are shipping more material.

My figures indicate a rather healthy growth in the lumber shipments over this period of years.

In the summary I have given are included (347) Port Oxford cedar, fir, hemlock, and white fir. There have been several carloads of myrtle wood shipped, of which I didn't take a record. I should judge in the past year there has been 30 carloads of that shipped to the eastern furniture manufacturers. All of this lumber was manufactured on Coos Bay. There was some that was shipped to the interior of California, but I don't know how much, what proportion. Most of it was shipped to the east in the form of dry lumber. The cedar that was manufactured by the veneer plants goes to Chicago and eastward almost exclusively. The fir goes to the Middle West, Mississippi River points.

In addition to the carload rail shipments (348) I have described there is a substantial quantity shipped by boat out of Coos Bay.

I have nothing to add to the figures that are already in
186 this record that were placed in the exhibit of Major Maginnis.

I can add nothing to what Major Maginnis has said with reference to cargo shipments of lumber. I believe that he stated that when that shoal that he mentioned that is inside the bar was removed that it would be an incentive to the shipment of more lumber by boat.

At the present time the common grades of green lumber mostly go by water because of their weight, and the upper grades of kiln-dried lumber, such as stock, the battery-separator stock, and the higher priced lumber, goes by rail. (349.) All lumber moving to markets of the Middle West would move by rail. I wouldn't say

the Atlantic Coast, because they have a line of boats running to the Atlantic Coast that might take that, but the Middle West would take all of that by rail, or a great proportion of it.

With reference to the development of specialty wood manufacturing industries on Coos Bay and their requirements as to transportation, almost always the specialty products go by rail—for instance, battery-separator stock—but the largest veneer plant down there has told me that from five to six per cent of their output goes by water. They ship an average of 200 cars a year. That is a very high-valued commodity. (350.) Six or seven per cent goes by water, and the rest by rail. The value would be from five to twelve thousand dollars a car. I wouldn't say that it is necessary that that class of commodity have express service, but naturally when a man loads a carload worth $8,000 he wants to get it to its
187 destination and get the returns back. It is not necessarily perishable, but on account of the value and the distance it is important. I believe that line of industry is increasing on Coos Bay at the present time. At the present time we have four factories or mills in Coos County manufacturing high-grade lumber articles. I do not think there are any others outside of Coos County; none in Curry that I know of.

From the standpoint of Coos Bay as a whole of the necessity for better transportation (351) facilities and a more direct route to the East, there is a possibility that the freight rates would be reduced if there is a shorter line. It seems to me so.

I think the opening of the route to middle west and eastern markets shorter by 400 miles would be a benefit to Coos Bay.

I do not know the route now followed by our lumber shipments to eastern markets. I do not know whether they go by way of Roseville, California, or through the Portland gateway. They would have to go from Marshfield or North Bend to Eugene, in the first place. And then to get to eastern markets, under present railroad construction, they would either have to move north to Portland (352) and thence east over some of the lines from Portland, or else south from Eugene into California, to Roseville, and thence east. In comparison with the two existing routes, one through Portland and one through Roseville, the cross-State line projected would make a much shorter route to eastern markets.

188 Cross-examination:

I have had no experience in sawmill operations, except in so far as my business as lumber inspector has brought me very closely in touch with the manufacturer, that is all. I have been supervising the inspection of lumber for the last 10 years, on Coos Bay. (353.) That does not necessarily bring me in contact with the lumber trade in this territory. I would not say I was informed fairly well with respect to lumber operations in competitive cities and towns in this

territory. My experience has been in Washington and Coos Bay. I know the size of the mills around Coos Bay and some in Washington, about Seattle.

Q. I notice by the figures you gave that the range in number of cars shipped by rail from 1922 to 1926, inclusive, range from a little over 600 cars to 2,800 cars. Now, do you know the car loading in feet? (354.)

A. From 20 to 25 thousand on each car.

Q. At a medium of that amount, taking the average of 23 thousand or 24 thousand feet to the car, your rail production will not aggregate over 50 to 60 million feet a year. Now, it isn't very much of a sawmill that doesn't put out a larger volume than that, is it?

A. A good average sawmill will cut from 60 to 100 million feet a year. I think our mills over there cut, in the aggregate, from the figures that were introduced in Exhibit 4, when totaled with our rail shipments, in excess of 300 million feet a year. We are shipping by water from 80 to 90 per cent of the lumber that is cut over in that country. (355.) We have a railroad in there now to serve that country. Lumber is our principal output and commodity.

189 I haven't any idea how much is invested in that railroad. I believe they say it is 122 miles from Eugene to Marshfield. There are a number of bridges over the rivers and bays and estuaries that are necessarily crossed in reaching our city. We want additional rail service in a competitive way for our community. I don't know how that is to be accomplished. Our chamber of commerce has not considered in particular that feature of it since I have been there. I know that the proposed line involved here terminates (356) on the eastern slope of the Cascade Mountains, some 225 or 230 miles from Marshfield. It is 240 miles to Portland. If that line terminates on the unsettled slope of a mountain 225 miles away, it will not benefit us.

Q. The mere connection of its tracks with the Southern Pacific in the fastnesses of the Cascade Mountains wouldn't help Coos Bay, would it?

A. Does it connect with the tracks of the Southern Pacific in the Cascade Mountains?

Q. That is proposed.

A. It would give a more direct route from Eugene east, would it not? It would be more direct than going by Roseville?

Q. But how about Portland?

A. Wouldn't it be more direct than coming by Portland? I don't know. I haven't considered that. (357.) It looks to me it would be a more direct route. I do not know whether both of them converge and come together at Granger, Wyoming.

There are only two ways for lumber to be routed out of Eugene now, and that is north by Portland or south by Roseville. It now takes both, I fancy. I am not familiar with the shipment, with the routing of the lumber.

This battery stock is pretty much of a finished product.
190 It is selected material and expensive of manufacture. It is worth probably 80 to 100 times as much per car as the ordinary lumber shipped out. (358.) There is some goes by express, but no much. The total shipments aggregate, I should think, a couple of hundred cars a year. I do not know what rate it takes. I am not a railroad man.

One plant manufactures veneer products, and they have an addition now that they are manufacturing furniture. Two of the battery plants, I believe, do not manufacture anything but these battery pieces. The 200 cars I mentioned is the output from one mill. In 1926 the Pacific Veneer shipped 55 cars. (359.) And the Coos Veneer & Box shipped 217 in 1926. Western Lumber Manufacturing Company—those are the three large veneer plants down there—shipped 200 cars in 1926. That is 472 cars of veneer products went out of Coos Bay in '26.

Q. That includes your battery stock and your veneer stock—and what are these shades you manufacture over there?

A. That is another firm. I didn't get the shipments from that mill. I went to the office three or four times, and I didn't find the man in. They started about two years ago, but they have only recently gone into the manufacturing of blind stock, window-blind stock. I do not know the routing taken by these cars that were shipped.

Of these 2,000-odd cars a year of lumber (360), I would say 80 per cent goes east. That is an estimate, you understand. I have no data on that.

I expressed the view that we might get lower rates on lumber if this more direct route were accomplished.
191 I do not know the way the lumber rates are fixed from all coast territory west of the Cascades. If it is all blanketed to Missouri River and eastern markets on the same rate, another or a somewhat shorter route wouldn't benefit us at all.

Redirect examination:

In my answer that if the cross-State line terminated on the east side of the mountain it wouldn't benefit us any, I did not have in mind a connection with existing lines. If it does connect with existing lines, it seems that it would provide (361) us with through transportation to the east over a shorter route and benefit us.

In the delivery of such heavy commodities and slow-moving freight as lumber, the fact that it is moving over a shorter line and is delivered to the purchases at an earlier date as a result of that movement is a direct benefit to the producer. He gets his capital from the investment sooner as a result of that movement.

Recross-examination:

As to whether you made it plain that you were inquiring about a physical connection with the Southern Pacific track, you said if

it terminated on the eastern slope of the (362) Cascade Mountains. I don't think you made it plain to me.

The increased shipments by boat will not lessen the rail shipments. I think the buyer specifies the routing which those shipments will take by rail. (363.) I am not clear on that, however. Twenty-four hours' difference in time on the ordinary shipment of lumber between Oregon and destination would not make very much difference to the shipper or the buyer.

192 Exam. ROGERS. You gave as one of your reasons for desiring this construction that the shorter route might make possible a rate reduction. If no such reduction followed, to what extent would that lessen your favor of the proposed extension?

A. Except quicker delivery. That would be the only advantage then, I fancy.

The only advantage competition would be, would be a possible better supply of cars. We do not have car shortage at present. There was a car shortage in 1922 or '23, but I have heard no complaint of car shortage for two or three years. (364.) Competition might reduce the rate. I don't know of any other result of the added rail facilities than better car supply and competition.

R. S. MADDEN was thereupon produced as a witness on behalf of complainants, and, having been first duly sworn, testified as follows:

Direct examination:

I reside at Caldwell, Idaho. I grew up in southern Idaho. I am in the real-estate business principally—loans. A large part of my time is taken up with farm management, for non-residents, and also for a string of banks. The farms that I manage for the string of banks are located in the counties of Adams, Ada, Canyon, Gem, Owyhee, in Idaho, and Malheur in Oregon. I think I have one property looking after in Payette, Idaho, Payette County. This will be my third season at managing these farms. (366.) I have also been engaged in abstract business, and a few others. I have rep-

193 resented loan companies. I have represented the Union Central Life Insurance Company, and I used to represent William MacMasters, of Portland, when he was in the loan business. In representing these companies my duties were to take applications for loans and inspect loans—nearly all farm loans; some city loans. The farms I inspected were located in southwestern Idaho. Most of my loans were made in Ada, Canyon, Gem, Payette, and Owyhee Counties. From the time I was 15 until I was 20 years of age I was riding the range, in the southwestern part of Idaho. It has been (367) pretty close to 40 years since I was 16 years old. I was acquainted with the Boise Valley in 1890. I was acquainted with the agricultural operations in the Boise Valley in 1890. I was acquainted with the extent of the cultivation of the lands in Boise Valley in 1890 and the conditions of agricultural development in Boise Valley in 1890. In those days about the only farming that was done

was growing enough hay to winter the range stock, and enough grain to winter the range stock. That was true of practically all of southern Idaho—cattle and horses, and a few sheep—in those days. (368.)

I imagine about 25 thousand acres were rather indifferently irrigated in Boise Valley in 1890. None of the bench lands were irrigated at that time.

I was acquainted with the operation of agriculture in Payette Valley in 1890; with the extent of operation of agriculture. I should say from 15 to 20 thousand acres were in cultivation in Payette Valley in 1890, rather indifferently cultivated. There was no intensive cutlivation in either Payette or Boise Valleys in 1890.

194 I was acquainted with the Weiser Valley about 1895. (369.) There were probably 12 or 15 thousand acres in cultivation in the Weiser Valley in 1895. There was practically no development, agricultural development, along the Snake River in southwestern Idaho in 1890. There was a little agricultural development in 1890 along Reynolds, Sinker, and Sucker Creeks, along all those creeks—I imagine 5,000 acres. That would be my guess. That would be a mere guess as to what was in cultivation at that time.

From the time I was 20 until I was 27 I farmed, taught school. I taught school in Canyon County; was treasurer of the county. Canyon County at that time included what is now Canyon and Payette and most of Gem. (370.) I was once employed by the United States Reclamation Service. I assisted in the classification of lands on the Vale project, also on the Owyhee project; and then I have been used as a witness for valuation of real estate by the Reclamation Service in condemnation proceedings. I have never been employed by any bureau of the Department of Agriculture. I have worked in connection with the Bureau of Farm Economics, I think it was, employed in estimating the values—at least the tendencies of farm values. I have worked with some of the employees of the Interstate Commerce Commission who were estimating values on Oregon Short Line right of way.

While I was in the abstract business, for some of the irrigation projects we made up their assessment rolls and assisted in the valuation of benefits. (371.)

Q. In 1890 the lands irrigated in southwestern Idaho were by private corporations, were they not?

A. The farmers' ditches; yes—either individual ownership of ditches or private corporations.

195 As to what kinds of organizations are used at the present time for the operation of the irrigation works of southwestern Idaho, most of them are irrigation districts, which are public corporations.

I have prepared an exhibit giving the agricultural data of the 10 southwestern counties of Idaho. This Exhibit 9 was prepared under my direction. Page one of the exhibit simply shows the irrigation development by watersheds since 1902 in the 10 southwestern counties of Idaho. (372.) In 1902 there were approximately 183,000 acres of irrigated land; in 1920, 663,000 acres of irrigated land. That is the amount of land included in the enterprises in 1920. The lands included in the enterprises have been practically reclaimed at this time. That information came from the United States 1920 census report.

Page two shows the dry lands, the non-irrigated lands, that are farmed in the 10 southwestern counties of Idaho. This information was taken from the report of the State board of equalization of the State of Idaho.

Page three simply shows the expansion in irrigation development in these southwestern counties since 1899. In 1899 in these counties there were $2,800,000.00 invested in irrigation works; in 1920 there were a little over $25,000,000.00 invested in irrigation works, and since that time there have been about two and a half million dollars of an added investment from those irrigation works. (373.) That additional investment was in the construction of the Black Canyon Dam in the Payette River above Emmett, and also construction of the works for what we know as the first unit of the Black Canyon irrigation district.

196 I have no amounts for Adams, Gem, Payette, and Valley Counties for 1899. Adams was a part of Washington at that time, Gem and Payette were parts of Canyon at that time, and Valley was part of Boise at that time. All those counties have been organized since 1910.

Page four shows the increased cost of reclamation, the increased cost of reclaiming lands by irrigation. The average cost per acre now runs between $30 and $40, I imagine, when in 1899 it would run probably four dollars, or something like that, per acre.

As to why I prepared that: The better lands in our country, and I think in almost any irrigated country, are the uplands, the higher lands. The lands in the bottom, along the river, it cost very little (374) to irrigate; all we have to do is to throw in a dam and turn on the water; but the better lands are the higher lands, and a larger percentage of higher lands, after the ditches are constructed, than they are in the lower lands, because the returns are higher.

As to the length of time it takes to put all the lands under a ditch and have irrigated: Our newest completed project in that vicinity is what we call the first unit of Black Canyon, 7,000 acres. I think in 1920, or possibly in 1921, the ditches were completed and water was turned on. Within two years there was only 80 acres of land in that unit that wasn't in cultivation, and that 80 acres was owned by a non-resident.

The first unit of Black Canyon is in the Black Canyon irrigation district.

When a ditch is operated by an irrigation district, they ordinarily levy a flat assessment, so much per acre, which is a lien on the land, and is collected whether any water is used or not; that is, it
197 costs a man just as much for water whether he fails to farm his land as it does if he (375) farms the land.

Page five shows the growth in the value of farm property since 1900. This was taken from the Federal census. In 1900 in these 10 southwestern counties there was about $16,000,000 worth of farm property. In 1925 there was $102,000,000 worth of farm property.

Page six shows the number of farms in these counties from 1900 to 1925. In 1900 there were 3,270 farms; in 1925, 9,931 farms.

Page seven shows the value of the livestock on the farms during the same period in the same territory, from $5,800,000 to $12,800,000. From 1920 to 1925 there is a drop. Drop in the price of cattle and sheep, I imagine, would account for that. (376.) There may have been a decrease in the number. I know this, that in 1920 cattle on the range were worth about $75 a head, and when the slump came the finance corporations that held mortgages on the cattle shipped almost everything out of the range country over there, and they are just getting stocked up again. There was, I think, in cattle an actual decrease. I don't take this to mean cattle on the ranges, just the cattle on the farms. These figures were from the Government census estimates.

Page eight shows the crop values from 1910 to 1920 in the same counties. In 1924, southern Idaho experienced a drought, that is, short water. 1905 was a short-water year (377), and 1924 was a short-water year, and the crop in 1924 would not have reflected an average, because it was a particularly short-water year, a short-crop year. The 1925 census referred to the crops in the year 1924.

Page nine shows the acreage and production of six of our
198 principal crops for 1910, 1920, and 1927. The 1927 is estimated by the United States Bureau of Crop Estimates. The 1910 and 1920 were taken from the Agricultural Yearbook. That is for the State. It was not available for the 10 counties, was not segregated.

Page 10 simply shows the increase in population of these same counties from 1900 to 1925.

Page 11 shows production there on some of our crops in these counties for 1910 and 1920. (378.)

Page 12 shows the new irrigation projects in process of construction in this part of Idaho. The land in the Black Canyon district lies very near where I live, and I have been over practically every section of the land. I was one of the classifiers for the Reclamation Service on the Owyhee project, also on the Vale, Oregon, project. When these projects in Idaho are completed, there will be 75,858

acres of new land in cultivation. That is the figure given by the Reclamation Service.

Page 13, is an estimate of the carload shipments that would be added on account of these new projects. I mean by saying within five years, 424 carloads, going on the assumption that in five years' time half of the land will be in cultivation. (379.) The Short Line reports for 1927 indicate that Canyon County shipped about 1 car of products for every 30 acres of land under cultivation, Payette County shipped 1 car for every 9 acres in cultivation, and Gem County shipped 1 car for every 20 acres in cultivation. I may have made a mistake in my figures, as to the 424 carloads, but that is the way I ran the thing through. Canyon County, or the Gem district, lies in these three counties, and the land compares very favorably with the land already in cultivation, and that would
199 give about—with 51 thousand acres under cultivation in the Black Canyon project that would give about 1,283 cars of produce to move, and I just simply assumed that one-third of that should be available for the cross-State road. Then within five years, if 51 per cent of land in the Black Canyon is in cultivation, there would, as I figure, be 1,283 carloads produced more than at the present time to ship out of that district.

It will take longer time to bring the remaining (380) irrigable area under cultivation. I estimate that 424 additional carloads would be provided by the years after five years within the Black Canyon for shipment, for the new road—1,283 altogether. I do not know whether the 424 will go over the new road or not. I just took that as the figure and took the third of the amount and estimated it would go over the new road, if it is constructed. What I have under Owyhee was arrived at in the same manner. It would be about 24,500 acres, approximately, of new land in Idaho that would come under the Owyhee project. That would make 816 carloads available for shipment altogether within five years; another 815 after five years. (381.)

Page 14: The first section simply shows the other possible projects in these counties, and the second shows the possible car shipments, or the estimated car shipments, over these projects when they come in; then the last section on that page summarizes the irrigable area of these counties. These feasible projects have not been started. They have been pronounced feasible. I considered them in this set-up.

I have prepared an exhibit showing the irrigation development in the State of Idaho.

(Said statement, marked for identification "Intervener's Exhibit No. 9, Witness Madden," was thereupon received in evidence.) (382.)

200 Exhibit No. 10 was prepared under my direction. It simply shows the expansion of irrigation in Idaho since 1890. The capital invested in irrigation works in 1890 in Idaho was

$1,029,000. In 1920, 91 million was invested. (383.) That is shown on the exhibit. This information was obtained from the United States census reports.

(The statement, marked for identification "Intervener's Exhibit No. 10, Witness Madden," was thereupon received in evidence.)

I have had prepared under my direction an exhibit of assessed valuation of the territory embraced in the 10 southwestern counties. (384.) The exhibit explains itself.

(The statement, marked for identification "Intervener's Exhibit No. 11, Witness Madden," was thereupon received in evidence.) (385.)

I have had prepared under my direction an exhibit of the growth of bank deposits in Idaho.

(The statement, marked for identification "Intervener's Exhibit No. 12, Witness Madden," was thereupon received in evidence.)

The irrigation projects in the Black Canyon and Owyhee districts are in a large measure the (386) same as those described as the Vale and Owyhee projects in Mr. Teutsch's exhibit. I didn't see Mr. Teutsch's exhibit, but then I have been over all three of those projects very carefully, and they run just about the same. The Vale and the Owyhee and Black Canyon projects are about the same quality of soil as the Boise project, which has been in cultivation for 15 or 20 years. The same general commodities are
201 produced; the same climatic conditions. In a general way they are dependent upon the same markets. The principal markets, at the present time, depends upon the commodity. Perhaps I had better make this explanation, that part of Idaho is subject to a great diversification of farming. It isn't a one-crop country. They can grow almost anything, that is, that is grown in a temperate climate, and we can grow the things that there is (387) demand for, whether the demand be east or west, and what we grow will depend largely upon what the market is calling for. The markets now for poultry products and dairy products are California markets to quite a little extent; the market for hogs and cattle, Portland and Seattle. Our wheat moves to Portland. Clover seed and alfalfa seed moves east. Most of the fruit moves east. Most of the potatoes move east, although some of them move to California. When I say California markets, I mean principally Los Angeles and San Francisco. (388.) Our turkeys last year moved to Philadelphia, but most of the poultry products move, I think, to California. I am not positive of that. Most of our dairy products go to California. Our section of Idaho looks toward the Pacific coast for its market of a good many of the products.

I was a witness at the previous case involving this proposed construction. At that time I testified that the development of our section of the State had been held back and delayed by reason of lack of sufficient markets. I have not changed my mind on that question at the present time. I remember that in the previous hear-

ing the carriers advanced the Rogerson-Wells cut-off as an answer to our problem. I had the impression that that cut-off had just been completed. I don't remember, though. (389.) I ques-
202 tion very much whether any shipments go over that cut-off from our locality. I think most of them are routed by Ogden. They are routed by the carrier. They wouldn't be routed by the shipper. There has been no difference in the rates via the Rogerson-Wells line and via Ogden that I know of. I haven't been shipping, myself. I have the impression that they only have two or three trains a week over the Rogerson-Wells cut-off, and we don't have the same service that we have over the main line. In my judgment, the completion of the cross-State (390) line as proposed in this case would be of material assistance to the southwestern Idaho counties I have listed. I think my estimates of tonnage are conservative. The principal commodities I list are grain, sheep, hogs, poultry, butter, eggs, and potatoes. I have allocated only one-third of those commodities to the cross-State line. I wouldn't say that most of those commodities find their principal market westbound. I haven't analyzed that. Our grain at the present time moves pretty largely to the Pacific coast. Sheep move the other way, most of it. Some of our lambs move westbound, but most of our lambs go on the Chicago market. (391.) A more direct route, and one that would throw open both the Puget Sound, the Portland and the California markets, without additional haul, would unquestionably increase the westbound movement. The same would apply to hogs. Our poultry, butter, and eggs largely move west at the present time. Part of the potatoes move west and part east. As to whether any marked change has been made in the transportation facilities serving southwestern Idaho during the past 40 years, we have the same outlet now that we had 40 years ago, the same outlet both east and west. Branch lines have been built within the State, and we
203 have the same outlet that they had 40 years ago west. There has been all this development in the last 40 years, and we still have the same outlet west that we had 40 years (392) ago and no additional outlet west.

Referring to pages 13 and 14 of exhibit 9, I have made no estimate in my exhibits for diversion of the present production. As to whether that would probably be a substantial quantity in addition to what I have shown, it depends altogether upon the demand. We could double our production with the same acreage if we had the demand for it. For instance, if there was strong enough demand for hogs in the West, we would turn all our grain in hogs. We would ship the more concentrated (393) commodities. That would decrease the tonnage.

In this set-up all I have indicated there was the increased production. I haven't indicated as a part of our present tonnage that would be diverted over that road. I overlooked that. I have included only new projects. I haven't made any estimate for the possibility that

existing projects that have been farmed for a number of years under one plan might produce and ship a far greater quantity or a different type of product and ship it over the cross-State line upon its completion.

As to page 7 of Exhibit 9, referring to livestock (394) in 1925 and the marked reduction under 1920, I could not make an estimate of the value of livestock on the farms at the present time compared with 1925. There has been a substantial increase. 1925 was the bottom of the curve, so far as livestock was concerned. We were right in the trough of the depression in 1925. I think that now the livestock on the farms would be greater than in 1920. The live-
stock on the ranges would be not as high as 1920. Take the
204 Owyhee country, the Jordan Valley country, and it is under-
stocked now in both sheep and cattle.

The livestock industry at the present time is expanding very rapidly. (395.)

Cross-examination:

In re the livestock industry, particularly with respect to cattle and sheep, we have the range lands, which comprise private range lands, State range lands, and Government range lands. They usually turn out in March or April, and come in in November and December. Some stock are run on the ranges the year around, in most of our country over there. I know up on the Owyhee Desert, at an altitude of 4,500 or 5,000 feet, both the cattle and horses, that is, of the dry cattle, will run up there all winter. We can't do that in the ranges of the Blue Mountains. (396.) They range in the mountains in the summer.

The greater the capacity of the ranger the greater volume of sheep and cattle we can put on.

Q. Your range practically limits what you can grow?

A. We have two classes of stockmen over in that country. Andy Little turned out 106,000 ewes last year (397)—everything is on the range there—perhaps one of the biggest sheepmen in the country that I know of. Then there is the farmer who will carry from a hundred to two or three hundred head of ewes on the farm the year around. Now, the capacity of the range would limit the number of sheep that the purely sheep or the purely cattleman can run. That is the large operator, and the small operator runs his stock at large.

205 Q. But this, as far as shipping to the market is concerned, east or west, is a very small percentage of the entire movement, isn't it?

A. Oh, I think the wool all comes to Portland.

Q. The volume of beeves or mutton or lambs shipped is moved and shipped largely by these men who are operating the range in connection with their own home ranch. Isn't that true? The small grower doesn't cut very much figure in the volume, speaking from a percentage standpoint?

A. That would be true of sheep. I question whether it would be true of cattle. As to whether it would be true of cattle in the Harney country (398), I don't get over quite as far as the Harney country. The John Day country and the Wallowa country are out of my territory.

There is a relation between the home and the range ranch in a purely stock country, but we are more of an agricultural country than a stock country. In a purely stock country the Government allots to a certain rancher so many acres, according to his herd and flock. That is on the Government reserves. Those ranches are not operating to their limit now. During the past two months I have made a number of trips into the Owyhee country up there, and the complaint among the ranch owners is that there isn't stock enough to take up the ranges. That is the complaint among the ranchers there who have hay to sell. (399.)

Southern Idaho has been kept back. It hasn't gone as far or as fast as it could if it had had more attractive markets and more of them. I think this question of markets is the great question confronting the agriculturalist of to-day. I think southern Idaho has kept pace with other countries.

206 Twenty years ago there wasn't very much of a market on the west coast. Twenty years ago Seattle and Portland and San Francisco and Los Angeles were comparatively small towns. And they weren't calling for our produce, but they are now.

Q. Your production has increased as the demand has come to you? (400.)

A. I think in those days our market was mostly east. We are turning to the California market more and more all the time. Most of the shipments are going into Los Angeles, because we haven't a very good way of getting into San Francisco, as I take it.

Q. Do you think that the existence of these great producing valleys of central California has anything to do with the fact that the bay cities don't call on southern Idaho for your products and your crop?

A. I think that Mr. Newton's report would indicate that San Francisco reaches out to other States than Oregon and California, reaches east for a good deal of the things that we could ship in there if we had a little bit better connection. Los Angeles does the same thing. But we can't shorten the route very much to Los Angeles, but we can to San Francisco, from this country. (401.)

Turing to page 13 of Exhibit 9, that Black Canyon project lies between the Payette and the Boise Valleys, between the town of Caldwell in Canyon County and the town of New Plymouth in Payette County.

Q. Perhaps we can get at this if we had an irrigation map of southern Idaho. This is a map prepared by the Oregon Short Line Railroad purporting to reflect the irrigated lands in south-

207 western Idaho, as explained by the legend there. Do you recog-

nize that portrayal of the situation there as fairly reflecting the existing conditions?

A. Yes. (402.)

(Said map was thereupon received in evidence, marked "Defendants' Exhibit No. 13.")

The Black Canyon project is shown in yellow on the map. It is between the Boise and the Payette Rivers there. There is no point in the proposed Black Canyon district that is more than 10 miles from a present station on one of the Oregon Short Line roads. Your shipping point there could by Nyssa, Oregon; Parma, Idaho; Notus, Idaho; Caldwell, Idaho; or Middleton, Idaho. Those points I have just named are on the main line, and New Plymouth and Fruitland on what we call the "pumpkin" line, the Payette Valley line.

I do not know how much further it is from Emmett or Nyssa to San Francisco by way of the proposed line, or by way of Wells, Nevada, how much further it is than by way of Crescent Lake. (403.) I haven't checked those distances. There wouldn't be anything from the Black Canyon shipped from Emmett. It would be a back-haul. It is close, but then you are hauling up the other way. There might be a few melons shipped from Emmett, because the Black Canyon is taking in some of that melon territory, but that is about the only thing that would come from Emmett Station. Nearly everything would come from Nyssa, Fruitland, Parma, New Plymouth, or Notus. I haven't checked the distances, none at all. I don't care to testify on anything that can be (404) checked out in a better manner than I can think of. (405.)

208 Q. (By Mr. SPENCER.) Now, Mr. Madden, the question of markets, I believe, we were discussing at the time of adjournment. Isn't it true that many of these irrigation projects have been and are in suspense because of this question of over-production and insufficient markets?

A. In Idaho, Idaho projects?

Q. Well, Idaho and elsewhere.

A. I don't believe that that is true of southern Idaho projects.

Q. Isn't it true that your southern Idaho people were opposed to the development at this time of the Columbia irrigation district, that large reclamation project in eastern Washington, because you were coming on now with the Owyhee and that the over-production would be so pronounced that you should wait for the markets to be able to expand and absorb?

A. I think, Mr. Spencer, that that condition was on account of funds. Our people wanted funds for their own projects, and if the funds went to the Columbia Basin project they would not get their funds. I do not imagine the correct reason was assigned. But I don't know that there was very much objection in southern Idaho there—if there was I didn't hear it—to the Columbia Basin project. I don't want to be understood as saying that there are adequate markets for everything we can produce. (406.) Take the potato,

the situation to-day is that there is practically no market for the Idaho potato. There is an over-production of potatoes in the United States this year. In the last two or three years the Idaho potato has been marketed all over the United States. But whether it can be grown at a profit depends altogether upon how short the potato crop is in the United States. This year there is a
209 big crop. We have had, though, a very diversified market throughout the country for our products.

Q. Now, that is a more important problem than whether you go to San Francisco by way of Rogerson and Wells, or by way of Ogden, or by way of Portland, or by way of Crescent Lake, isn't it?

A. The main thing is to get to market with the least possible cost and in the most expeditious manner. The shortest route is not always the (407) most expeditious one. If there is not enough traffic to maintain a traffic density, it is true you can't maintain the character of railroad or give the service that you could if you had the traffic.

Regarding page 1, Exhibit 9, as to the areas capable of irrigation, checking up with the State engineer's office, I believe that that is practically all irrigated. (408.)

Q. Now, are they settled and in cultivation, or simply by irrigation do you mean they have water available?

A. I mean farmed and water applied, crops growing. That comprises all of the irrigation projects in the southwestern counties.

On page 2 I refer to the cultivated dry farmed land. I refer to the State board of equalization as having made this classification. I will explain that in this way, Mr. Spencer: The assessors of the various counties assess the lands and classify the lands. And of course that is shown in the report of the State board of equalization. Now, then, I assume that that is very conservative, because the assessor of each county wants to hold down his valuations (409) as much as he possibly can in order to avoid State tax. I assume that on the whole these officers do attempt to function properly and do their duty and make a proper assessment and proper return.
210 I think that an assessor is usually very conservative on his acreages and valuations.

Q. On his valuations; but he would have the acreage in correctly, wouldn't he?

A. Not necessarily. Over with us the State board of equalization will raise or lower one class of property. Say, where irrigated land is assessed at $75.00 an acre, or something like that, if he can throw some of that land in a lower classification he will do it, if he possibly can, in order that his county won't spend more than what he considers its just share of the State tax. And naturally if this is not dry-land farming he would throw it into a grazing class, or into a lower classification in order to avoid his county spending any more of the State tax than necessary. This is equalized here on page 2. (410.) I think it is conservative. I assumed it was fair.

Q. Now the capital investment here on page 3—how many of those are Government projects?

A. This is classified by counties rather than by projects, and I can't tell. Page 1 is classified by watersheds. I can't tell by that how many of them are Government projects.

Q. Are your reclaimed lands in southern Idaho so situated with respect to the Snake River that they have been reclaimed at a cost per acre as reflected on sheet 4 of your Exhibit 9?

A. This is according to the Government census reports. It is true; yes. (411.) This is as I understand it. Page 4 of Exhibit 9 is presented to reflect the cost per acre of reclaiming, of putting the water on the land, so that the farmer can turn it on and use it and proceed with his cultivation.

Q. It includes, as I understand you, to the extent that it may be necessary, the levelling and the building of ditches where required?

211 A. No. My understanding there, Mr. Spencer, is that this is simply the construction of the canals, construction of irrigation works. It does not have anything to do with levelling the land, or anything of that kind. It is nothing else except the irrigation works themselves.

Q. Well, I meant the canals. I should not have said the ditches and the levelling. I appreciate that is not the case. (412.) But in all the Government cases that is true, isn't it?

A. That is true that it is not.

Q. I notice by the official publication by the Department of Interior, in a publication prepared under the direction of Dr. Elwood Mead, Commissioner of the Bureau of Reclamation, published by the Government Printing Office in 1925, speaking of the Owyhee reclamation project, at page 142—"The total estimated cost of the project is $17,404,000, divided as follows: $139 an acre for new land not now supplied, $126.50 an acre for lands in pump districts and $25.00 for lands under the Owyhee ditch." In fact, this Owyhee project is reflected upon this map, Exhibit 13, is it?

A. The Owyhee project, I think, is not reflected upon that map at all, Mr. Spencer. That shown in yellow on the west bank of the Snake near the junction of the Oregon eastern branch and the main line of the railroad is the land under the old Owyhee ditch. (413.) It has been there 40 years, that in yellow.

Q. Well, what is the green down there between the yellow and the river?

A. I think perhaps you are right, although this map is not correct, because most of the Owyhee project lies south of

212 Ontario and west of Nyssa. I think there is traced out a canal line coming out, well, from a point just east of Vale; then it swings off a little south and east towards the Snake River, and then doubles back west again, and then south, and then swings off into Idaho. Now, I think, if you had colored that you would have

the Owyhee project, but you do not have the Owyhee project colored on your map. The only thing you have is what they would call the Dead Ox Flat division of the Owyhee project. That is in north of Ontario, containing about 15,000 acres, if I remember rightly. You have perhaps 15,000 of the 140,000 in the Owyhee project colored in yellow, as I see this map. The words "Owyhee project" are on there. Between those words and the Snake River there is an (414) outline commencing with the figure "3" down on the base there—the Boise base line. And then it meanders up there, crossing the Owyhee River and the Malheur River, and extending along the margin of the yellow to opposite Weiser almost. That is the Owyhee district. Now, if I remember rightly, Mr. Spencer, Dr. Mead does not recommend building at the present time the portion that you have colored in yellow there. I think that his recommendations are for the portions south of there, if I remember correctly. You have the Vale project, but not the Owyhee on there. The Vale project has been under construction for a year or so. (415.) It will be under construction for I don't know how long. For this Boise project the duty of water is determined to be 4.6 acre-feet diverted and 3.22 acre-feet delivered. That is just about the average on the Boise project that is required.

Q. And the Boise project is the large one appearing here in green and marked "Boise project" on this Exhibit 13, and is served by the Arrow Rock Dam Reservoir?

213 A. You have in green here all of the lands served from the Boise River. About half of them are the Boise project and about half of them are older settled lands than the Boise project. The Boise project is a Government project, but perhaps 150,000 acres were in cultivation before the Boise project was constructed.

The Warm Springs project is not connected with the Owyhee project; it is an irrigation district, and that is not a Government project. The Warm Springs project includes the low lands along the (416) Malheur River there, both south and north of Vale, and some on Willow Creek; yes; around Vale. Vale would be about the center. That is shown there on the map approximately right.

Q. Now, the water for that is taken from the reservoir south of Drewsey, and between Drewsey and Riverside, and carried down the Malheur River to Namora?

A. It is carried down the Malheur River and diverted at about what they call Divine's Hill, I guess, about 8 or 10 miles above Vale on the Malheur River.

Q. How do you account for this great expense reflected by Dr. Mead's study as compared with this average expense, or this expense that is set forth as of 1920, on page 4 of Exhibit 9?

A. Most of the earlier projects along the river irrigating the lower lands were simply diversion dams; well, a good many of them had no diversion dams at all in the river, and they used sluices and almost anything to carry the water; so the cost was practically nil.

Then as they began irrigating the higher lands they had put in reservoirs and higher diversion dams (417) and all of those things, but they were reclaiming better land.

Now, in the Boise project—the Boise project, I think, if I remember rightly, irrigates 146,000 acres of new land in the Boise
214 project. That cost $77.00 per acre, but inasmuch as the older lands cost practically nothing, very little, it held the average down to $34.00 or $35.00 an acre; something like that.

Q. What do you mean by this on page 4 here? You have got all the lands in Boise County as having cost only $10.50 an acre?

A. I imagine that would be about the cost of those irrigation canals in Boise County in 1920. (418.) I don't think they have made any expenditures in Boise County since then.

Q. When was the Arrow Rock Dam completed?

A. Oh, in Boise County? Now that is charged not to Boise County, because there is not any land irrigated in Boise County from the Arrow Rock Dam. That is all in Canyon and Ada Counties in Idaho, and Malheur County in Oregon, that is irrigated from the Arrow Rock Dam, but nothing in Boise County. Boise is the county seat of Ada County.

On page 7 of this same exhibit I give the value of livestock on the farms in 1920 as $28,800,000, and in 1925 as $12,800,000. One reason for that shrink is the fact that they have shipped out so much of their livestock and disposed of it. It is my judgment that since 1925 the value of livestock has increased to a level substantially as high as it was in 1920; that is, I think, if a census were compiled now of the value of the livestock on the farms in these counties, it would just about be where it was in 1920, because the values have increased and the numbers have increased. (419.) On direct examination I distinguished between those that were on the farm and on the range. That was not because I was putting a higher price on the dairy herds and a lesser price on the beef cattle. I know of an instance, within the last two weeks, $100 a head was offered
215 for cows and calves, range cows and calves out in the Jordan Valley country. Now in 1923 or '24 they could not have gotten more than $35.00 a head for the cows and calves.

Jordan Valley is in Malheur, about 3 miles from the Idaho line. Caldwell is the nearest point. It is south of Caldwell about 60 miles—south of Nyssa about 60 miles. But this is a stock country in there purely. You have the Jordan Valley irrigation district indicated on the map, Exhibit 13.

Q. The town would be a little bit north and east of the Jordan Valley district. (420.) Is that right?

A. Yes; it would be north of the Jordan Valley district, within about 3 miles of the Idaho line; so that would put you in township—if I remember rightly, the town of Jordan Valley would be in township 31 south, range 45 east. You can locate it that way, Mr.

Spencer. The valley itself is 65 to 75 miles to the nearest railroad station, Homedale branch, that goes into Nyssa. It connects with the main line at Nyssa. By Homedale branch I mean that branch line that appears on Exhibit 13 along the west bank of the Snake River, extends into the so-called Gem irrigation district. It is marked "Homedale branch," connecting with the main line at Nyssa. I think it is 62 miles from the town of Jordan Valley to Homedale. (421.) The valley is south and west of the town. I think there would be perhaps 25,000 acres of irrigated lands in Jordan Valley. Most of it is flood irrigation. Hay is the principal crop. The older part of the Jordan Valley is all wild hay. Now the irrigation—in the Jordan Valley project down there, I think, is only five or six thousand acres in cultivation; I don't know. The 1,500 in cultivation is alfalfa. There is no other cultivation than the 1,500 (422) on the Jordan Valley project itself. It is small.

216 I said that one of the ranchmen in there the other day was offered $100 a head for cows and calves. The steers are probably worth more; but for cows and calves, that is, the one head, the cow and the calf, one head. They would not give $100 for one cow and $100 for one calf, but they would give $100 for cows and calves. As to whether weaners are selling for $50.00 right now, I don't know about that.

I haven't any estimate on the value of southwestern Idaho crops for any year since 1920.

Q. Now, you were not into the Los Angeles market to speak of at all, until after 1923, were you—southern Idaho? You didn't do any business to speak of, or enjoy any participation to speak of, in the Los Angeles market, until after 1921, did you, for your crops in southern Idaho? (423.)

A. Not so much as now.

Q. And now it is more important to southern Idaho than all the coast markets combined, Seattle, Portland, Oakland, and San Francisco. Isn't that true?

A. The Los Angeles market?

Q. Yes.

A. It is to southeastern Idaho, that is, from Twin Falls east;. but I think it is not, so far as our part of the State is concerned. I am not sure about that.

In regard to page 9, Exhibit 9, corn: This is from Government sources. They make the estimate; I don't

Q. I am not questioning the estimate, but how did it come about there was such a big increase in corn there between 1920 and 1927. Where is it raised?

A. Most of the corn in Idaho is grown in Payette, Canyon, and Ada Counties. A good deal of the corn is fed there. I think

217 practically all of it is fed except that corn that is canned. There is a cannery at Payette and a cannery at Wilder, Canyon County. As to whether this is stock or sweet corn (424)—he

simply says corn. The most of it is field corn that is fed. It would not be fed as ensilage, or they would not include it in bushels. There is no tonnage that I know of in the shipment of corn from Idaho. I think that is practically all fed to hogs and cattle and sheep. Sometimes we import corn into Southern Idaho. I am not sure that it is every year.

I estimate there 24 million bushels as the potato crop. That appears to be high, although there is a big potato crop in southern Idaho this year and the condition of the crop is excellent. I think about 16 or 18 million bushels is the highest crop we ever claimed to raise up to 1927. (425.) The estimate of 24 million bushels is from Mr. Jacobson, the Government reporter at Boise. There would be some to go to San Francisco via the cross-State line, but it would depend upon the market. The movement of these crops, which are our basis crops, depends upon the market and demand from all over the country, as to how it would be routed. All of these crops are grown in southern Idaho. There are none of them grown in northern Idaho, to a large extent, except grains, wheat, and oats. They are grown around in the Moscow country and in there. (426.) The others are all grown south.

As to when the Black Canyon irrigation project is going to come into operation, that depends upon the Bureau of Reclamation. There is an appropriation now of $900,000 awaiting the approval of the President. Dr. Mead, within the past two weeks, has signed his certificate of feasibility and sent it to President Coolidge for his approval. So far as I know he has not yet signed it. But it
218 has passed Congress and it has passed Dr. Mead, the Commissioner of Reclamation. It has passed everything except the President. I migh say the Government has already expended $2,000,000 on the dam at Black Canyon, and $450,000 on a power plant. It has gone that far. (427.) That was several years ago. I think the power plant was built within the last three years, something like that; and the dam was built prior to that. That dam serves the Emmett irrigation district of about 22,000 acres, but it is not on the Black Canyon district. All of these projects are a matter of rather slow construction.

As to whether the estimate of Dr. Mead is 5 or 6 years before the Owyhee reclamation, I don't know. I am not familiar with his estimate.

Q. Now, you don't know, from Exhibit 10 here, how much of this $91,000,000 is invested by the Government, do you? (428.) You have got $91,000,000 invested already in irrigation works over there?

A. Well, the Boise project cost about $11,000,000—not to exceed $20,000,000. The American Falls project is more recent than this. That would run her up a few more millions. But that was conceived and built since 1920. It was to furnish additional water required for districts that were already producing, because they didn't have sufficient water and also to add more land, to bring more land

into cultivation. But that does not come within a good many miles of being into the counties under consideration.

Q. But you have got all of southern Idaho? As I understand you, this is irrigation development in the State of Idaho, U. S. census?

A. Yes, sir; that is true, on this exhibit.

219 Q. Now, it is true, speaking of the American Falls project, that in the early estimate the duty of water was made too low (429) and the estimate was not sufficiently severe. Isn't that true?

A. On the American Falls?

Q. On any of these projects there in the early ones. The Twin Falls project, for instance, has suffered because of inadequate water supply. Isn't that true?

A. Not of the original segregation on the Twin Falls project. There was 120,000 acres, if I remember rightly, originally in the Twin Falls project. But there are other projects out there. Now the Twin Falls north side, and some of those projects that were constructed by private enterprise, where the promoter was interested in a profit and was interested in selling bonds, and a good many of those projects have suffered very much.

Q. Yes. And this American Falls expenditure of millions of dollars by the Government was made primarily to take care of those projects to the end that they might have adequate water?

A. That is true of the projects, both above and below American Falls. I don't know of any project where the duty of water has been as high as 1½ acre-feet. (430.)

Q. Now how is it, then, that in this Owyhee project, Dr. Mead determines the duty of water to be 4.6 acre-feet? That is in the reservoir, I assume?

A. Yes.

Q. And 3.22 acre-feet delivered?

A. Yes. Well, that is a lower duty than 1.8 acre-feet. Just get me; this is what I have in mind, Mr. Spencer: If 1.8 acre-feet

220 of water can irrigate an acre of land, it is doing a higher duty than if it takes 3 acre-feet to irrigate. I hardly think they have increased the volume of water that is required to reclaim these lands in recent years. I believe that we are using as little water now per acre as we ever had.

Q. Well, you had to provide more, but you say three and twenty is about right. Is that right?

A. Around 3 acre-feet; yes; between 3 and 4 acre-feet. It depends upon the crop and the condition of the soil. (431.)

Q. Now, I understand from your testimony that you attempt to say that these products that are going to the coast from these 10 southwestern Idaho counties are going by the cross-State line, do you? Do you want to give that as your opinion to this commission?

A. I have this in mind: A lot of our shipments take hogs and cattle, and a good many other shipments, if we had the cross-State line, would move across the cross-State line and would probably be diverted north or south, depending upon whether there is a better market in Portland or Seattle than there is in San Francisco. For instance, in the livestock market it might break, and it breaks very quickly within 24 hours.

I don't know who started this diversion proposition of livestock at Crescent Lake connection with the Southern Pacific.

Q. Mr. Teutsch was talking a lot about this diversion north and south. Well now, if livestock is over here at Ontario on the main line of the Oregon Short Line at a given date, it will go from Ontario through to Portland, and even to Seattle, without an unloading for water or feed, won't it?

A. Well, I know of shipping from Caldwell, that is approximately 35 miles the other side of Ontario (432), they always unload some place along the line, usually at Huntington; they usually feed
221 at Huntington when they ship to Portland. That is true a number of years ago. I haven't paid any attention to it now. That was 8 or 10 years ago.

Q. Don't you know there is a livestock special operated over to the coast from Nampa west and goes through without any unloading, within the prescribed time?

A. I don't know. I didn't know it ran from Nampa west without unloading. I am not doing shipping.

Q. Now if that is the condition, why shouldn't a man determine, when he is shipping at Nampa, whether he wants the Portland (433) market or the Seattle market or the San Francisco market rather than call for the investment of millions of dollars in a railroad across the Oregon desert?

A. He can't always tell what the market is going to be when he gets here. I can't.

Q. Don't these men know and keep in touch with the market and get their information every day, so that they won't get together and crowd the market? The market in Portland and Seattle is a limited market, isn't it?

A. It is a limited market, and the market has broken as high as $1.00 a hundred between the time that the trainload of stuff would leave southern Idaho and the time it would get to Portland. Most everything, I think, is shipped to Portland.

Q. And the buyers from Spokane and Seattle, and all of them, trade there in the Portland market?

A. I can't imagine that anything would be shipped from southern Idaho to Portland and then back to Spokane. (434.)

We don't ship very much stock to San Francisco. The buyers from California go into the Portland market to buy.

Q. And their presence in the Portland market makes a
222 favorable price, the more buyers you have. Isn't that right?

A. It should be true.

Q. Now they won't congregate around on the shores of Crescent Lake to discuss livestock prices, will they?

A. No; I imagine they would not.

Q. Well, where are you going to have this assembly and determine what the markets and the prices are to divert your stock?

A. Well, it would depend very largely on what happens to the market between the time that it leaves the point of shipment and the point of destination arrival.

Q. Now, is there any other commodity from these southwestern counties that you can think of that would be particularly assisted if the cross-State line was built?

A. Yes. The matter of the movement of range stock back and forth (435) for feeding purposes. We grow chiefly in southern Idaho. If we could have that cross-State line, Oregon livestock would go to southern Idaho to feed, I imagine, or northern California. Sometimes they have a drought in northern California.

Q. Have you got any feeding lots that are any more extensive or potentially any greater than in the Klamath Falls Basin?

A. I don't know about the Klamath Falls Basin. But there is a lot of territory between Boise Valley and Klamath Falls.

Horses are pretty well off the range now. These range horses, or range cattle, that are coming in to southern Idaho from Oregon, are not produced in southwestern Idaho counties.

Q. What other products of southwestern Idaho will go via
223 the cross-State line and work to the advantage of (436) the producers of those 10 counties and put them in any better shape than they are in now?

A. Well, it strikes me that almost any of our products that move now to California could move better over the cross-State line than over a longer route, that is, anything north of Bakersfield.

Q. And do you know whether there has been any increase north of Bakersfield in your shipments to California since the Rogerson-Wells line was built, which cuts off several hundred miles from the original Ogden route? Has it made any effect?

A. It has not made any difference in the rates, I understand, and there is very poor service over that line. It is not used very much.

Q. Well, if you don't tender the stuff to ship, how can it be used and how can the cross-State line be used?

A. The Wells-Rogerson cut-off is out of our part of the State. It is down in the south-central part of the State. We think just as kindly of the south end of our State as we do central Oregon. (437.)

Q. With respect to these carloads that are discussed on page 13 of Exhibit 9, "They" assumed ⅓ to be available to the cross-State line. Who are "they"? Whom did you have in mind?

A. That is purely arbitrary; that is mere guess. That was probably a misstatement on my part, if I said "they." I don't recall

that Mr. Teutsch suggested that to me. I discussed the matter of what would be available for the cross-State line with him, at Boise.

(438.) He was over at Boise. I do not think I discussed it
224 again with him down here. I prepared Exhibit 9 at Boise. It was printed at Boise. I don't say that Mr. Teutsch and I agreed on a third of the products of southern Idaho counties to be put over this cross-State line. We discussed a number of things. We discussed what the available tonnage would probably be. (439.) When we parted, that was the conclusion we had arrived at.

Referring to page 14, Mountain Home of 400,000 acres would be between Boise and Mountain Home. As to whether it would require a tunnel 40 miles long through a mountain range to use it, I don't know. The waters for that project, 400,000 acres, would probably come from the Salmon River.

Q. Now if it happens that you have got to build a tunnel through a mountain 40 miles long as a part of the expense of this reclamation, it will be a long time before the cross-State line gets 4.444 carloads of traffic from that Mountain Home project, won't it?

A. That will be very slow development; yes.

Q. Now this Bruneau project here, 280,000. (440.) The State engineer of your State has determined that not to exceed 100,000 acres of that project can be furnished with water. Isn't that true?

A. I don't know. Our former State engineer, Fred Wilkey, insisted that the whole thing could be irrigated. That was in 1918, I think. I haven't followed that closely since.

Q. All these rugged developments here that call for reclamation of about 2 or 3 or 4 thousand acres must be financed by the Government? Everyone accepts that as true, don't they?

A. Private enterprise has been trying to finance these projects, but I don't believe that it can be financed by private enterprise.

225 A. Now on this Mountain Home project, Mr. S. H. Hayes, former attorney general of the State of Idaho and former mayor of Boise, has been very active in the past few years in attempting to finance this, and it is very largely upon his activities (441) there that I put this in—upon his standing. He has not raised the money for that 40-mile tunnel, that I know of.

I think it is true that with this Bruneau project it will be a great many years before that will furnish 3,111 carloads for the cross-State line.

The American Falls irrigation project would not bring anything under irrigation in any of these 10 counties. It is further east. I do not know how much additional land, not now irrigated, that they will bring in ultimately. I haven't retained that in my mind, although Mr. Hayden, of the Reclamation Service, told me. (442.)

As to how many acres there are in the present Twin Falls project that are in cultivation and bearing, including the north unit, the whole works over there tributary to that Rogerson-Wells line; that is out of my territory entirely. It is nearly 200 miles from Caldwell

to Twin Falls. But there are 180,000 acres in the original segregation; that is in the south side of Twin Falls. I would judge about 250,000 acres of land that is now in production, and which has access to the San Francisco and Oakland markets.

Exam. ROGERS. Mr. Madden, on page 9 of your Exhibit 9 what part of this production can be associated with this cross-State line?

A. That depends altogether upon where our best market is. We (443) have not been able to get into the San Francisco
226 market as well as we think we should. And then it depends, as I said a while ago, we have an outlet down there that lends itself to a first-class market, and wherever there is a demand for any of the crops that are grown in temperate climate we can furnish that crop if they furnish the demand.

Exam. ROGERS. But what inference would you have the commission draw from this exhibit, in passing on this cross-State line?

A. It will have to take that in connection with Mr. Newton's testimony as to where our commodities move to. That is all.

Exam. ROGERS. Mr. Newton assumes, as I remember it, that all of the present all rail movement between San Francisco and these 10 counties would be over a cross-State line, and you say now that you don't have any market with San Francisco?

A. No; I don't say that we don't have any market. We haven't got in there as well as we feel that we should get in there; and, furthermore, if we get better connections with San Francisco we believe that our market down there will double. I don't know what our present market is now to San Francisco. I think Mr. Newton's testimony would give that. I didn't compile any information on that. (144.)

Exam. ROGERS. What part of this tonnage on sheet 9 can we take as moving over the cross-State line?

A. I haven't any information on that, Mr. Rogers.

Exam. ROGERS. But you can readily see, Mr. Madden, unless this is to be associated in some way with the cross-State line it won't mean very much in this case, will it?

A. That will have to be taken in connection with Mr. Newton's exhibit on the car movements. In itself it does not mean
227 anything, except in connection with Mr. Newton's exhibit on the movements, where our markets are. I haven't made a study of our markets, as I have of our production. That would also be true of most of the data on page 11.

Exam. ROGERS. Now on page 12 of Exhibit 9, is any of that land, this 24,500 acres, included in the exhibit of Mr. Teutsch?

A. No. I think Mr. Teutsch just simply took that portion of the Owyhee project that lies within the State of Oregon. (445.) I didn't understand Mr. Teutsch was including anything in the Owyhee project in Idaho. That would also be true of the 476 carloads shown on page 13. If one is a duplication, the other would be.

Mr. TEUTSCH. Mr. Examiner, by way of explanation there, as I take Mr. Madden's exhibit, the only duplication would be on new lands in Idaho, on which he estimates, I believe, 624 cars would be originated. On the Owyhee project how many cars do you estimate will originate to move west over this cross-State line?

A. 476.

Exam. ROGERS. Referring now to page 14, if your present markets do not absorb your present commodities, how would you be able to dispose of the commodities that would come from these projects on page 14, if they were actually developed? (446.)

A. That is our problem.

Exam. ROGERS. Well, how can we connect that up with this cross-State line?

A. Well, if there is a market in California for additional products or for additional produce, that would solve it.

228 Exam. ROGERS. But if there is not a present market for present products in California, what will the situation be when these projects come into bearing?

A. There is a present market for present products, because we are shipping a lot of stuff to California. The cross-State line would give us a better route to California, a shorter distance in shipping. I think it would increase the shipment on almost any commodity. We expect the cross-State line to decrease the time of transit and also decrease the rate. (447.) If it does decrease the time in transit, it would cause a different situation on livestock; on perishables of any kind it would be.

Exam. ROGERS. Let's take the commodities on page 9. On which of those would a shorter time, leaving out the consideration the rate, have effect?

A. The commodities on page 9—there would be very little of that that we ship to California. Uniced potatoes would be about the only thing that the time would make any difference with on that particular page.

Exam. ROGERS. What difference would you say 24 hours would make on potatoes?

A. Of course, if the potatoes are matured. I don't imagine we would be shipping many uniced potatoes into California. Those are potatoes that we ship in July. They move in refrigerator cars. (448.) We do not expect these 24,000 bushels to move in refrigerator cars, because the potatoes that we ship out, the early potatoes that are not matured, are the ones that move in refrigerator cars. Later potatoes do not. I do not know what portion of the 24,000 bushels would be those early potatoes moving under refrigeration;

229 I would hardly say 20 per cent. There are a good many moving under refrigeration, but I haven't the information on it. If the potatoes did not move under refrigeration, a period of 24 hours would not make very much difference. (449.) In com-

puting the tonnage which we expect to move from these 10 counties over the cross-State line I have not given any thought to the revenue which that tonnage would produce to the carrier.

When I spoke of two or three trains a week over the Rogerson cut-off, I had in mind freight trains. I haven't any real information on that. If that were true, and it was freight trains, it would mean to my mind that the carrier was not giving the service to that line that it ought to have.

Exam. ROGERS. Well, what if these three trains a week were sufficient to move all the traffic that would be routed that way properly? Would that cut any figure?

A. I have the impression that the amount of traffic that is routed depends a little bit on the service it receives, as well as that the service is dependent upon the traffic.

Exam. ROGERS. Do you have in mind that the traffic which should go over this cut-off is now going some other route? (450.)

A. I don't know. I would say that is out of our part of the State, and I rather suspect it is going around by the way of Ogden.

When I referred to the service over that cut-off not being more than two or three trains a week, I had in mind that the service at present is unsatisfactory and the shippers are not shipping that way, are not routing that way. But I haven't gone into that. Remarks that I have heard led me to that statement. I haven't made any investigation of it.

230 As to what outlet to the west we would have if the proposed line was constructed that we do not have now, it would put us in direct touch with all of central Oregon and northern California, western Oregon, that is, over as far as Eugene. Central Oregon is a stock country up there very largely. (451.) I am not familiar enough with that country to know just what would happen, but I think our largest benefit there would be the movement of livestock back and forth. I do not know what our trade outlet would amount to in the territory west of the Cascades but north of Eugene. I am not familiar with that. As to what we would have south of Eugene and west of the Cascades, it would make a more direct connection there of a few hundred miles, to any point that is south of Eugene; to everything between Bakersfield and Eugene. I haven't checked as to by how many miles.

Exam. ROGERS. How many miles would it have to be in order to make these available outlets mean much to the Idaho farmer?

A. I think in shortening the distance there it will help. (452.) It will help in the movement of our commodities. Our crops are not shown anywhere in my exhibit. I haven't included our dairy products. My understanding is that is to be included by another witness. For instance, Idaho produced about 21,000,000 pounds of butter a year. About one-fourth of that is produced in Canyon County. (453.) That goes very largely to California.

As to how Los Angeles compares at the present time with San Francisco as to accessibility to southwestern Idaho, as to distance I haven't checked it. We market more produce in Los Angeles than we do in San Francisco.

Exam. ROGERS. Why is that? Is it because Los Angeles is more accessible than San Francisco?

231 A. Very possibly the market has been able to absorb more of our products under existing rail conditions. If we had quicker service and a lower rate to Los Angeles, for instance, it is quicker and easier to ship to Portland than it is to Los Angeles. If it were (454) shipped quicker and easier to ship to San Francisco than to Los Angeles, we could ship there. We sell a lot of things in Portland, but it don't absorb all there is, by any means.

Shorter time and a lower rate is not helping us to Portland, but it would go to San Francisco. We are marketing a lot of stuff now in San Francisco, but I haven't the figures on that, though. As to whether we now have a shorter time and a lower rate to Los Angeles than to San Francisco, I don't know. I haven't the data on that.

Exam. ROGERS. Then, if that be true, how do you know that if you had a lower rate and less time to San Francisco than to Los Angeles, that the movement would be to San Francisco, if you don't know now which is true?

A. Well, I can make this statement: I have just simply prepared a statement of what our production is over there and the stuff that we have to sell. I am not prepared to make an argument; it is just simply a statement of our conditions there. (455.)

Redirect examination:

Q. (By Mr. ELLIS.) With reference to Exhibit No. 13, which is the irrigation map, I am wondering whether in your Exhibit No. 9, on pages 13 and 14, you have made any estimate as to the number of cars of commodities that would move over the proposed cross-State line from the area in southwestern Idaho shown

232 in the green color on Exhibit 13, or did you include only estimates of a portion of the area shown in yellow?

A. Oh, those estimates were made only on the new projects coming in. I don't make any estimate on those existing projects which are shown in green. My estimate covers the yellow portion only, within the State of Idaho; and there should be a yellow portion south of Snake River within the State of Idaho, but it is not colored; that is, on the Owyhee project. The map, Exhibit 13, does now show in yellow all of the projects now under construction. (456.)

In addition to talking with Mr. Teutsch, I consulted other sources of information or other people who are familiar with this question. I got the best informed advice I could before I came here to testify.

The Portland market on livestock is a very limited market. That is one of the principal reasons why we are anxious to get a shorter

route to San Francisco. We feel that that condition, the limited market in Portland and the circuitous route to San Francisco, has, to a large measure, discouraged the production of livestock in Southwestern Idaho.

Recross-examination:

Q. You don't mean that the Portland market is not just as good a market in price as the San Francisco market is, or (457) do you know anything about that?

A. Well, I think not. I think on an average, take it over a period of years, the San Francisco market is higher. That has been my observation. Just now I am inclined to think the Portland market is about as good as San Francisco. I think there is not
233 very much difference now, but over a period of years I think the San Francisco market has been better. It takes a higher rate to get to San Francisco.

These estimates here are just for these additional projects.

Q. You mean to say that your estimate on page 11, Exhibit 9, has anything to do with these additional projects? What ones are associated with your additional projects?

A. Pages 12 and 13. And the first two sections of page 14. Those are the only tabulations that are related to the additional projects. (458.) The principal commodities are grain, sheep, hogs, poultry, butter, eggs, and potatoes.

Q. Now, you don't expect to ship, or to obtain a consuming market, for any of those products in the Willamette Valley or in the Rogue River Valley in western Oregon, do you?

A. We might ship corn into the Willamette Valley. That is the only thing I can think of now. Corn is not there. We grow a lot of it anyway. We consume it too. Some years there is corn imported from Nebraska, when there is a low price on it back there and a high price for us.

Q. I want to ask you where, in western Oregon, you are going to sell any of these commodities and have them consumed, either potatoes, eggs, butter, poultry, hogs, or sheep or grain? Aren't they already produced and raised and exported from western Oregon now?

A. Our wheat all moves west, but I guess it comes into Portland. I rather think most of it moves west. This year it is just (459) a break as between east and west. I do not think the wheat generally as a rule goes to the south and the southeast from our part of Idaho. The dealers tell me they ship to Portland. Further east in the territory it all goes east.

234 Q. Have you got any of those commodities on page 13 that you are going to load into these cars for the cross-State line that are going to be consumed in western Oregon? I want you to name one of them.

A. Well, under grain I imagine corn would be the only thing we would ship into western Oregon.

Q. Isn't the dairy product listed there that you said you would save the time on and that they would move over that way?

A. This [indicating]? (460.) Now I see what this is. I just noted these were the principal products that would be first grown on the new projects. These are the things they can get into quicker than anything else. They can get into hogs and poultry and those products quicker than they can anything else, and those are the things that would probably be coming in in the next five years, on page 13. That is what I had in mind. That is the first products that would come in on them. You see, it will take five or six years to grow an apple tree, and there are certain of those products it takes longer to grow.

Q. But there won't be any of these consumed in western Oregon? As a matter of fact, you have got to compete with western Oregon? Western Oregon and the Klamath country will compete with you for the San Francisco market with its consumption of these very commodities, won't they?

A. The only quick commodity I can think of in this list we might ship to western Oregon would be corn and alfalfa. You are having to ship both into western Oregon.

I am acquainted in a limited way with the products of the Rogue River Valley in southern Oregon, and the Willamette (461) Valley. I am acquainted in a limited way with the Umpqua Valley. They raise poultry in large volume there. I imagine their
235 market would be both in Oregon and California. As to San Francisco I do not know. I do not know where they ship their cheese and butter. I know that we ship more cheese and butter to California than Oregon does. I am not sure it goes to Los Angeles, but it goes to California.

I have lived practically my entire life in the State of Idaho. (462.) During those years I have had exceptional opportunities to become familiar with the development of the southwestern section of the State.

Comr. McMANAMY. Now, is it your opinion, based upon that experience, that in the next one or two decades development will continue at the same rate that it has during the periods covered by your exhibits?

A. Not quite. I think that the greater rate of development is back of us. That is, that there will be future development, but it will not be at the same rate. The irrigation development can't possibly be as rapid as it has been during the past 20 years. The increased production that may come from lands now under cultivation will make up, in some degree, for the lack of future development in irrigation.

As far as westbound traffic is concerned we have the same outlet that we had 40 years ago. (463.)

Comr. McMANAMY. But you didn't intend to mean by that that the capacity of that outlet was the same as it was 40 years ago?

A. The Oregon Short Line and the O.-W. R. & N. are in better physical condition than they were 40 years ago.

Comr. McMANAMY. Well, there have been additional facilities provided in the way of double-tracking and shortening of
236 the line, reduction of grades, and all of that sort of thing, have they not?

A. East of us there has. The Oregon Short Line is not double-tracked all the way through yet. It wasn't double-tracked at all 40 years ago.

We have reduction of grades in the Blue Mountains, the Umatilla cut-off, and things of that sort. They all increase the capacity of the lines.

Comr. McMANAMY. Now, looking ahead for a period of, say, 20 years, do you think that the increases in capacity of the present lines will not be sufficient to permit the complete development of the southwestern portion of Idaho? In (464) other words, do you think there will be a lack of transportation facilities which will hamper development?

A. I should think so; yes. I should think that we—at least hope that we would have some more lines within the next 20 years. I think the development of the country will surely require it. That includes not only present lines but shorter lines, if routes can be found. I am not arguing for competition, or anything of that kind, because I feel if one system can give us the service and the rate, that is just as good as having competing systems.

Comr. McMANAMY. What I am trying to develop is this, Mr. Madden, if you can help me: Your experience in the State of Idaho, your knowledge of the country, and your opportunities for observation have been exceptional, and we have got to find some means of projecting that into the future, because clearly action in this case can not be based upon butter and eggs that are on the platform waiting for shipment, or cattle that are along the right of way now.
237 (465.) And your experience in the past ought to make your opinion as to the future of some value, and I wanted to get in the record fully your opinions as to what would be required to afford reasonable transportation service to the people of southwestern Idaho.

A. Of course, transportation is entirely out of my line. As to the needs, I really believe that within the next 10 years or so, just as soon as markets will justify, the production of those 10 counties will be doubled.

Comr. McMANAMY. Of course, the increase in production that has taken place during the past 20 years has been due to the development, not only of production facilities but also of marketing. The two must go together?

A. The two must go together, and we can't market without railroads. Now Mr. Spencer spoke of the Jordan country. That Jordan Valley project is practically a failure because it is 65 miles from

transportation, and the only thing they can grow is something for feed to their livestock and they have to drive their livestock to market. That is the project, not the valley itself. It is limited (466) because of transportation. Transportation is the first essential in our country. Without transportation we can't develop. (467.)

[File endorsement omitted.]

238 PORTLAND, OREGON, *August 6, 1928.*

J. W. SMEED was thereupon produced as a witness on behalf of complainants, and having been first duly sworn, testified as follows:

Direct examination:

I reside at Caldwell, Idaho, and have lived there 16 years this fall. I have lived in Idaho 33 or 34 years. My occupation is stockman or rancher. I own five ranches and I operate some of them myself, and some I rent. (468.) My ranches are located in Boise Valley, Idaho. I have been engaged in the livestock business twenty years in southwestern Idaho, principally in Caldwell. I buy stock in two or three different States. I buy and sell livestock and feed them for market, ship them to market; run some on the range. I operate a stockyard in Caldwell. I think my yards in Caldwell is the second largest this side of Denver. I have four hundred acres at Caldwell; twenty pens that are under shed for twenty carloads of stock. The outside pens will (469) accommodate 150 cars. I have pastures that are adjacent to the yards, that they use in connection with the yards for grazing sheep. In my livestock operations I operate in Idaho, Montana, Oregon, and Washington, principally; once in a while we get down in Nevada. In eastern Oregon we buy cattle and ship both for feeding purposes and for market—ship some of them direct to market, and we principally ship the feeders all home and feed them, ship them later when they are fattened out. My chief occupation is livestock business. I operate my farms incident to the livestock business. I am acquainted with the livestock business in southwestern Idaho and eastern Oregon. I have been acquainted with the livestock business (470) in southwestern Idaho twenty years. I think the conditions at the present time of the livestock business in southwestern Idaho is generally in pretty good shape.

239 In the last five years the livestock business in southwestern Idaho has changed. The prices are much better. A good many mortgages have been paid off by livestock men; the livestock industry on the ranches have increased. I don't think there is any material increase on the ranges. They are increasing as fast as they can under the present conditions. There has been a change in the livestock conditions on the ranges during the last five years. A good many of the rangemen have sold off their cattle and sheep in order to pay off their indebtedness. I think possibly sixty per cent of the young stuff, maybe seventy-five has been shipped to market. The sheepmen have been breeding black-face stuff for mutton, and sold both the ewe and (471) wether ends, that is, generally speaking.

There has been some young stuff saved, but not a great many. They are beginning now to save the ewe end and build up their herds, also in the cattle, but that is only in the last two years. In the last seven or eight years I would say the decrease in the livestock business in the range was fifty per cent. I think it struck bottom in '24. The conditions on the range now as compared with 1924 are better, owing to the fact that they have shipped lots of wild horses to canneries and have taken them off the ranges, the herds of cattle have been cut down in the last five or six years, and naturally the range conditions are getting better; there is less stock on it. (472.) They shipped lots of wild horses to the canneries, both here at Portland, and the Hansen's plant in Butte, Montana, and one in Nevada; practically cleaned up the ranges of wild horses that used to be on the range, use the grass for cattle and sheep.

I would say that the present tendency of the livestock
240 business on the range is toward the increase. I think the livestock conditions on the range will eventually come back to what it is, say in 1920. It will take some time to increase that back.

I am acquainted with the livestock conditions on the ranches in southwestern Idaho at the present time. They have increased in the last five years. I think, in our locality at least forty or fifty per cent (473), that is, in southwestern Idaho, eastern Oregon. I am fairly familiar with both places. I am acquainted with the market conditions for the livestock produced in southwestern Idaho and eastern Oregon and have been acquainted with them for twenty years. Our available markets for cattle and sheep and hogs is in Portland and Seattle. We do send some to Ogden, once in a while to California. The Portland livestock market is very limited. There is practically no sheep market in Portland or Seattle, only just a load now and then at different times of the year, but there is no regular sheep market in Portland or Seattle for any amount. We must look for our cattle and hog market other than Portland or Seattle either east or San Francisco or Los Angeles. (474.) It is not profitable to ship cattle and hogs to the East from our country. For instance, we can load a fat steer here and ship him to Kansas City or Omaha, and they shrink anyhow from a hundred to a hundred and ten pounds, and he is only a feeder when he gets there. By a "feeder" I mean—you take an animal that is what you might term fat here and ship him fifteen hundred or two thousand miles and he loses flesh and isn't a top animal by the time he reaches those eastern markets. The further you ship an animal the more he shrinks, and of course the distance in market con-
241 ditions is the price it costs you to get him there, and shrink, and feed bills, and expenses of that kind. In fifteen hundred miles we generally feed—we would not—in going with a train of stuff that might be termed fat stuff leaving here we wouldn't aim to feed them on the cars over twenty-six or twenty-eight hours.

Now, that all depends on the run and how (475) far you get them. Sometimes you may get quite a good run; other times we don't make so good. We generally figure about three hundred, four hundred miles, as far as we go on a feed. Sometimes you don't get that far; sometimes you get two hundred.

As to the Portland market—we will say that there's fifty cars in Portland yards to-day—there may be eighty; I don't know what there is—but they can handle on this market down here fifty or sixty cars very nicely, but if you get over that it is an over-supply of stock; consequently they generally take off from a quarter to a half dollar. I have known them to take off as high as a dollar and a half; but that isn't usual, but if you get up around eighty-five cars of cattle in Portland at any one time as a rule you break the market.

There is a market in San Francisco. Our most feasible market, if we had this new proposed (476) road, would be San Francisco. The market is there now. It it too expensive to ship there, both in shrink and feed bills, and the condition that your cattle would arrive in there on the longer route. We would probably have two more feed bills by going from southwestern Idaho by way of Portland to San Francisco than by the new proposed route. If we were shipping fifteen or sixteen hundred carloads of cattle to San Francisco by way of the proposed route, or by way of Portland, the feed and shrink would amount to something like a hundred and
242 five or six thousand dollars. I have figured that up, on 1,632 cars. The actual figures on it are $119,963.60. I have reduced it to a car basis. It runs around sixty-five to sixty-eight dollars a car. (477.) The expenditure all depends on how many times you feed; if you get a good run and only have to feed once, that feed will run around twelve or fifteen dollars a car on cattle, and about twenty dollars on double-deck hogs, fifteen to sixteen dollars on double-deck sheep; and then on additional run, say four hundred miles, after they have been shipped and unloaded two or three times the shrink gets less; that is, they shrink less per three or four hundred miles than they do on the start, and I figure that a one per cent shrink—that is what it figures out going to San Francisco. In other words, shipping on a long distance, when stock get tired, worn out, it takes them longer to fill back after you get them to market than it does on a short shipment.

I don't think the natural future development of the livestock business in southwestern Idaho would develop as it is entitled to develop under present accessible market conditions. We have in the Black Canyon and the Owyhee projects about seventy-five thousand acres of new land; it is all (478) going under water. At the present time every available piece of land in our country that is under water is being farmed. Naturally, each year we are producing more tonnage; as this land is farmed and fertilized, it naturally produces more, and we are getting a better class of farmers

all through our section, and we will produce thousands of tons more in the future than we have in past, including this new project, which is seventy-five thousand acres, or approximately seventy-five thousand acres, under these two projects, and would
243 be adjacent to this road and the one we now have. In connection with that, I might say that naturally all those farms will have more or less livestock raised on those farms, and that will go to market either over this route or some other one. With the present development of the livestock business in southwestern Idaho I at times find the present markets over-supplied. The future development, to a certain exent, would be retarded by not having more accessible markets. (479.) I do not class San Francisco as a market in that answer. We are not accessible to San Francisco market from our country at the present time. We do not count San Francisco as one of our available markets now. If the proposed road across central Idaho was constructed and operated, I think it would be a great asset to that particular territory, eastern Oregon, and southern Idaho. If it isn't constructed, I think, the development of that territory would be interfered with and checked. In southwestern Idaho hay is raised very extensively. We have to raise hay in our country, first, to fertilize the soil, and, next, as a forage. We raise large quantities of hay, which ordinarly is worth from five to ten dollars a ton, we will say. The last few years it hasn't reached ten dollars. That same hay in California to-day is worth $22.50 in the carload, that is, on board (480) the car, and delivered at California points. That is what the dairymen are paying for hay to-day. They do, however, in certain parts of California have a weevil restriction that I don't know whether it has been overcome or not, but we have the forage there, and raise it, and we can put it down there if we had the facilities to put it there with.

244 They raise anywhere from four to eight tons of alfalfa hay to the acre of ground in southwestern Idaho. Some get four cuttings, some three, and some two. I am acquainted over in the Gem District, in Owyhee County. They produce a lot of hay there. They used to claim up as high as nine tons, but I think around seven possibly would catch the majority of them.

In Colorado, of late years, the last few years, has been noted as one of the greatest (481) feeding points in that section, and that is due to two reasons—maybe more that I don't know about. The first is, they produce a lot of awfully good feed, that is, sugar beets and hay and grain. They are available to three or four good markets in a short run. People buy our feeder stuff in Oregon and Idaho and Montana, ship it to Colorado on through billing, feed up the stuff in that section, and then go to market. Now, the reason they like to do that, because when they get in Colorado and the market is right they can load their stuff, and on a short run they can get right into market. The reason, I think, this road is so vital

to our particular section, eastern Oregon and southern Idaho, that we have a better climate than Colorado does for feed, we have equally as good a feed, and we have the stock right here in these four States that could eat that feed up and be shipped to market, and San Francisco, as a rule, and other parts in California, is generally as good a lambs market and as good a cattle market, considering the difference in distance as we would have anywhere to market our stuff. At the present time we ship very few lambs west. There were a few shipped this spring from our country around to San Francisco by way of Ogden and Salt Lake.

245 They would ship stock in from Montana to southwestern Idaho for feeding purposes in case (482) there were more markets in that territory. We have shipped a good many ourselves, but it isn't practicable for people to ship cattle from Montana, we will say, or western part of Wyoming, back this way on feed-in-transit rates to come to the coast. Not that Portland hasn't been a good market—Portland has been as good a market this last year as anywhere, considering the distance that we had to ship it, but it is a limited market. For instance, I will say that in our locality there has been a time when there has been as high as three hundred thousand head of sheep fed there, and possibly a hundred thousand cattle—I wouldn't be positive how many cattle. Now, we receive our cattle in the fall of the year—they are received at about the same time of year, all our feeder stuff, practically all about the same condition, and they go on feed at about the same time and are fed practically the same kind of feed. Naturally, with a small difference of how a fellow feeds and gets his stuff ready, they are all about ready to market at the same time of the year, within two or three weeks. Now, we can't go east with them, haven't been able to for years, owing to the long ship. Now, we have to come to Portland or Seattle with them, and when you are in Portland (483) you are in Seattle and when you are in Seattle you are in Portland, as far as the market is concerned—sometimes a variation of ten or fifteen cents, and that will be taken up in the shrink; so that, for instance, if we were feeding what we should be feeding there in order to take care of our stuff even under the present conditions, let alone the seventy-five thousand acres that they are putting under water, we

246 would be at the mercy of Portland or Seattle markets to market our stuff, because, under the present conditions, with long shipment, additional feed costs, additional shrinkage, we can't afford to go to San Francisco or go east and compete with the other feeders that have the shorter ship.

I have prepared a proposed exhibit, giving the number of beef cattle, sheep, and hogs in the ten southwestern counties, from the 1925 census, and also carload shipments of cattle, sheep, and hogs from the ten southwestern Idaho counties, from 1921 to 1927. That is the exhibit which I had prepared. (484.)

(The statement referred to was received in evidence, marked "Intervener's Exhibit No. 14, Witness Smeed.")

In my opinion of 1,394 carloads of cattle they shipped in 1927, forty per cent would be shipped over the proposed line in case it was constructed and operated. (485.) As to how many carloads of sheep would be shipped over the proposed line in case it was constructed, that would depend on the market conditions. We have no market for sheep on the western coast now. There is a market in California, at San Francisco and Los Angeles. I would not be in a position to estimate the number of carloads that would be shipped over the proposed line in case it was constructed. We would be safe in saying that 50 per cent of the 482 carloads of hogs would go to San Francisco, or California points. (486.)

The conditions in southwestern Idaho are such that the hog industry, if an opportunity is given, will greatly increase. In order for it to increase more adequate market facilities and opening up new markets is necessary. As a stock man operating in southwestern Idaho, eastern Oregon, and Montana, the construction
247 and operation of the proposed line of railroad is a necessity for the development of southwestern Idaho. The accessibility of the San Francisco or San Francisco Bay markets would eliminate the flooding of the markets. For instance, I couldn't give the exact dates, but in July of this year hogs went off a dollar and a half on the Portland market in one day. Now, we had seven double decks of hogs off of our yards that day. Now, we had no way of knowing that the packers were going to take off a dollar and (487) a half, but we did know before the train was out of our district that there was a lot of hogs going to Portland; there was no place else to go with them. You will find markets that will go off 15 cents to half a dollar, even in the big eastern markets, but you don't find those drops of that kind on those markets. This 15 cents to half a dollar is per hundredweight. This dollar and a half is a dollar and a half per hundred. Some of the livestock that we now ship to Portland is resold and shipped on to San Francisco. I wouldn't say to what extent. There's quite a few feeder cattle and a good many feed cattle at different times of the year go to California. (488.) Those are purchased by California buyers at the stockyards and shipped on or commission men that work for them. The fact that the California market, or San Francisco Bay points, has available a population of over a million people, as compared with some three hundred and fifty thousand at Portland, is the important factor which makes it desirable for us to reach San Francisco Bay. When I speak of San Francisco markets, I have in mind all markets tributary to San Francisco. I don't think this would benefit us as far as the Los Angeles market is concerned, but I don't think
248 we particularly need Los Angeles if we can reach the other points. As to what advantage, if any, would there be in the cross-State line, so far as opportunities for diversion either to

Portland, Puget Sound, or to California points, I would say if I was loading a string of cattle in Montana for the coast market, we would say, Portland or San Francisco, if this new route came, when I got down, we will (489) say, to Pocatello, or to Nampa, my commission man would wire me that the market was going to be lower here by two to four bits, going to have a big run of cattle, and I would divert those cattle to San Francisco, or possibly I might divert them from San Francisco to Portland or Seattle, according to the way the market might be or the run might be. You take it at this particular time of year—now, we had this only two weeks ago; we loaded some cattle out of Montour—that is up in Idaho. They were grass cattle. When those cattle were gathered and ready to ship—and we have got to ship them; they are just like lemons or oranges; they spoil if you don't get them to market; in other words, they shrink—we loaded those cattle to Portland, because there was no place else to go, and we knew there was going to be 85 or 86 cars of cattle here and the market was 50 cents lower. Now, instead of those—those cattle were bought to sell on the market, or possibly within ten or fifteen cents of the present market, and when it went off 50 cents that caused a loss. Of course, that is generally expected, a little loss, but when they get up to where they take off six bits or a dollar that is serious. It can be eliminated by having other points to go to.

I think the fact that we might divert at the extreme western end of the cross-State line, at Crescent, and go either (490)
249 to Portland or Seattle, or any California destination, would increase the value of that diversion privilege.

As to whether our cattle could travel nearly the full width, or length of the State of Oregon to Crescent and yet not have traveled any additional distance, or extra distance, and that we would still be able to receive in our Los Angeles market by as short a route as though we had sent them from our shipping point around by way of Ogden, I don't know. I am not familiar with that. If the mileages show that that is the fact, it would be a big advantage to the livestock. There would be a saving in shrinkage and feeding costs of approximately $68.00 per car. That would indicate the increased value of our livestock at the shipping point. Those figures are made on cattle. There's three different figures made there, separately, for sheep, hogs, and cattle. I verbally put the figures for sheep in the record. There is a movement of feeder stock from Oregon points into Idaho (491); there has been in the past from California points to eastern Oregon and southern Idaho. When there is a grass shortage in California and sections of Oregon, there is a substantial shipment of stock into Idaho. At the present time—well, last year there was thousands of tons of hay in this Burns and Harney Valley country that wasn't worth $3.00 a ton, that if those cattle men in northern Califronia could have got up there to that it would have been practically fed up, because the grass, the summer

grass was there, and they could have shipped their cattle in there to that winter feeding last winter and fed that up and still had grass there this summer for the cattle to run on. That would have been an advantage both to the livestock men of California and to
250 the hay producers in Oregon. I think this cross-State line as proposed would facilitate that movement, largely.

As to what extent cattle are being driven over long distances to market at the present time, or to railroads, in past years there (492) has been lots of cattle driven from Burns and the Harney Valley country south to railroad, but they do have access to the Crane-Burns lines now, which may eliminate that partially, but I think even this fall that their markets will be enough better in California that it will justify them to drive those cattle 300 miles rather than to ship them over the Crane branch and out this way. If they were driven toward the California markets, Winnemucca, they would load them at Winnemucca and Wells and Alturas and Lake View. I am not just particularly acquainted with just where they do load those cattle, that is, the majority of them. There is a condition, however, that could be benefited largely by this road in the Jorday Valley country. Now, they drive to Murphy, and from there—Jordan Valley is in eastern Oregon. It is away back off of the Snake River. Murphy is on a branch of the Short Line south—practically south of Nampa, a little west. Some of the livestock are shipped to Portland and some of them are shipped east. (493) Some go to Los Angeles. I don't know whether any of those cattle go to Frisco or not. I wouldn't say. I suppose at times they do. But that one particular place there is a very bad drive. It is up over a high range of mountains, and you have to take and drive the beef up over a steep mountain and then down again and drive them down a hundred—well, it is between 80 and a hun-
251 dred miles. That particular drive is occasioned by the fact that there isn't a more direct outlet to the west through the State of Oregon. Those cattle should be loaded at Riverside. It is quite a bit closer. I am unable to give you just the mileage, but that is a flat country to drive over, the Jordan Valley. If they were loaded at Riverside, they would logically, if the cross-State line were built, move west either to Portland or to San Francisco.

I wouldn't say as to what extent the production of hogs has been discouraged or prevented by reason of inaccessibility of sufficient markets, but our farmers and hog raisers in our country are very careful, on account of only having the one market—that is, we call one market; we say Portland; of course, there's times when we send hogs to San Francisco or Los Angeles, but it has to be quite a bit better market down there to enable us to take the long (494) way around and compete with the other markets. I would say with the increase of irrigable land, with the opening of the San Francisco market, that it would be safer to say that 50 per cent more hogs would be raised in our country, and I believe a hundred, but it

would be safe in saying 50. There are many times 482 cars of hogs shipped to California points from Iowa, Nebraska, and other points in the Middle West, Colorado, and those States. I was a witness in the previous case involving this same line. I don't remember how the question was put to me that this line was absolutely a necessity, and that the people in our particular locality could not exist and raise cattle or hogs or farm products without different marketing facilities and a more satisfactory outlet to California markets that we have at the present time, but this is the meaning that
252 I had: In order to develop that country as it naturally should be developed, with the irrigable land that we now have, and the irrigable land that is coming in, it will be absolutely necessary for additional market facilities (495) for that country to develop as it should. My testimony at that time has been verified by my experience the last three or four years. Our annual turnover of sheep in Idaho and eastern Oregon is estimated around 50 per cent, and I would say that of cattle 40 per cent. As to hogs I wouldn't want to say, because I am not a handler of hogs. I do buy them, but I am not a real hog man. I wouldn't want to give an estimate on that because it isn't accurate.

253 Cross-examination:

I said we operate five ranches incidental to our stock assembling and shipping business; that is the way we term it. I have operated—not this particular five ranches, because I buy and sell ranches, too, sometimes, but for the last (496) ten years I have operated from three to five ranches every year, had that many on hand.

It is not the purpose of that operation to raise feed for our feeding operations at Caldwell. We do feed some of that feed, however, but we keep the most of that feed to stock on our ranches for the benefit of fertilizer for the ranches, and we feed some of that feed at the stockyards. The large number of our pens and the extensive facilities that we have are provided for the purpose of feeding both transient stock and stuff we handle ourselves. We buy in a considerable volume of traffic both cattle and sheep and feed it, condition it, and ship it to the market. That is our big business. And the cattle we ship west pretty largely, and the sheep we ship east. The sheep business enjoyed exceptional prosperity in (497) southern Idaho because of the development there of a type of lamb for market purposes that perhaps excels any other part of the country. Feed conditions are due to a lot of that. Whatever the conditions may be that brought it about, that is the fact, that the prosperity of the sheep men in southern Idaho has been accomplished by the production of an early spring lamb for the Chicago, Omaha, Kansas City, and eastern markets, and some western markets. This is true to such an extent that it has received even national recognition and comment.

Some sheep are shipped to Los Angeles, too, but I have never shipped any there. I ship some cattle to Los Angeles.

254 Q. Now, it is further to Los Angeles than it is to San Francisco, isn't it?

A. From our point?

Q. Yes.

A. The way we go now?

Q. Either way, except to Portland?

A. No; not either way. (498.)

Q. What?

A. Oh, you mean the other way, that we have now?

Q. Yes.

A. Yes, sir; I think it is.

Q. And yet with that condition you ship over six times as many cattle to Los Angeles in a year as you ship to San Francisco Bay points, don't you?

A. We have, I think, possibly, up until this year—I have no record of the shipments of this year, but I will give you an explanation of that, if you will allow me to. The condition we have in San Francisco has been this: Up until last spring we weighed our stock off of the cars in San Francisco; in Los Angeles we weighed them on a fill, the same as we do on other markets. And there is no stockman that like to sell off the cars, weighed off the cars, no matter what the price is, unless it is exorbitant; that is one reason why you will find from now on more stock going to San Francisco. In fact, there already has this year, from our records at home. The method of selling to San Francisco changed. (499.)

As a rule we ship these sheep in double-deck cars, and as a rule they arrive in good condition. In general I don't think we have any complaint against the service of the Oregon-Washington

255 Railroad & Navigation Company of the Oregon Short Line or the Union Pacific Railroad Company, as far as livestock shipment is concerned.

Q. As a matter of fact is there any other road in the West that specializes and gives the expedited service that the Union Pacific system does in the movement of livestock?

A. That gives any better service?

Q. Yes.

A. No; I wouldn't say that they did.

Q. Now, you think if you had a cross-State line that you could get down into that San Francisco market from Caldwell better than you can now?

A. Yes, sir.

Q. With your livestock?

A. Yes. (500.)

Q. It would depend on what kind a line it was, wouldn't it?

A. Yes, sir.

If it were a branch line type of railroad, with thin traffic and necessarily slow movement, I would prefer to ship over a somewhat

longer route, if the facilities and road were of the quality of the main line of the Oregon Short Line, but the Union Pacific would never stand for that kind of a road; with the reputation they have got of giving service they would never give us that kind of a road. As to what the condition of the road from Ontario Junction to Burns is as compared with the main line of the Oregon Short Line, there is no comparison at the present time, because the roadbed, in the first place, isn't there, and it is crooked; there are short turns in it, and I suppose possibly that is due to not having more business over that line that justifies a better road. I don't know what else. That appeals to me as ordinary business common sense. This road,
256 as far as its alignment is concerned, is necessarily tied into the Malheur Canyon. (501.) It has got to go up that canyon in order to get out to Crane. Speaking of the curvature, of course, you could straighten out some of the turns. If that character of line were continued across the State and connected at Crescent, a shipment starting at Ontario Junction would be unloaded over here in north Portland before you would be out of the desert with this cross-State line, I think, if you didn't fix the road. (502.)

Q. Now, if we are going to have one of these trunk cross-State lines, we have got to rebuild that line, then, from Burns to Ontario, a distance of 150 miles. Is that right?

A. No; no; you wouldn't have to come from Burns at all.

Q. Well, from Crane, then, wherever——

A. Yes.

Q. All right; 127 miles.

A. Yes.

Q. All right. And then we have got to build across the new road, across the desert to Crescent Lake?

A. Yes, but let me tell you, when you build that new road across there that you are opening up another new territory that is about as big as this 75,000 acres I am telling you about, that is very fertile land, that will be adjacent to your railroad.

Q. Where do you find that very fertile land that is adjacent to the——

A. Well, there's lots of fertile land, even around the Circle Bar, and around those big holdings there in the Burns territory, and clear on out that dry lake country.

Q. You mean to Crescent Lake?

A. I don't know whether it is Crescent Lake or not.

257 Q. Christmas Valley?

A. Yes. (503.) I have ridden every foot of that country, trailed cattle over it. You can trail cattle across that desert at certain times of the year when the water holes are full. We do that in the spring of the year; they do that in the fall of the year, late fall, after the first snows come. I don't know why, then, instead of going clear down to Winnemucca they don't drive over to

Klamath Basin, where there is such nice grounds, because I never had that part of it. I never operated to go that way. I have operated to come this way, that is, to come east.

I have not checked up on the mileage from Caldwell, which is my shipping point, to San Francisco via Wells, Nevada. (504.)

I don't call the railroad of the Oregon Short Line from Minidoka down to Twin Falls, a high-class railroad; at least it isn't high-class service, not going across the Rogerson cut-off. You go from Caldwell to Minidoka to go down to Twin Falls. That is the main line of the Oregon Short Line, but we don't ship that way. I am familiar with it and have operated all around that country. (505.) And then you go down to Twin Falls; if you are headed for Wells, Nevada, that is where you would go. You can go that way. It might be a good railroad. There is a lot of complaint about ever putting any stock over it. I have never shipped over it. I have had shipments that went out of our yards. We specify the routing of our stock shipments, but we do not specify the routing when someone comes in and buys. The bulk of our shipments are bought out of our yards and the buyer routes them. That is true all over that country. (506.) The buyers come in from Portland,
258 Seattle, Tacoma, and buy and route their stuff. And they come in there from Kansas City, Omaha, Chicago, and Denver and compete for that stuff. And they ship it east to Denver, Omaha, Kansas City, and Chicago in large volume. If there is a shrinkage, they sustain it. We don't sustain it on their shipments. I ship quite a few cars. I shipped 1,286 head—that would be about 30 cattle to the car—last year to western markets, Portland and Seattle; and one year I shipped 600 cars of cattle to Denver. (507.) I think that was in 1924. That was an unusually large shipment for me to make myself. We don't ship many sheep or hogs—not over an average of, maybe one hundred cars a year. We sell practically all our stuff to home.

The buyers absolutely do take into consideration this prospective shrinkage that I am talking about in fixing the price they pay for the cattle.

I know about the sale that was made to Kansas City last fall away up in the Bear Valley, 50 miles north of Burns, where they paid one hundred dollars a head just as they ran, destined to Kansas City. That was the Oliver cattle. (508.) They did not figure on the shrinkage when they paid that much for them (509) because they bought them by the pound; he bought them at so much per pound. Mr. Smith bought those cattle from Mr. Vick; that's the Oliver cattle. They were shipped to Payette and fed in transit at Payette and were, I think, billed to Kansas City or Chicago; they later went on to Grand Island and went on the feed at Grand Island.

Q. Well, as a matter of fact, the point I am getting at here is, you ship extensively from your country to Kansas City, Omaha, and Denver, don't you?

A. Lambs and sheep; yes.

259 Q. Well, practically all sheep go there?

A. Yes.

Q. And you ship extensively of cattle, beef cattle, too, don't you?

A. Yes; there's quite a few shipped there.

Q. Well, probably more cattle shipped to the east than there is to the west? (510.)

A. No.

Q. No? Including Denver?

A. No; I wouldn't include Denver. It might be that there's more shipped to the east, including Denver, than there is to the west.

It is a five-day run with cattle or mules or sheep to Denver. I don't know just what the distance is offhand. The run to Omaha is from five to eight days, including feeding. The livestock special does not enable them to make Omaha as fast or faster than they do Denver. I never could. It is about sixty days since I have gone with any to Omaha.

Q. (By Mr. SPENCER.) Well, then, a railroad across central Oregon of the type that is there now into Burns, or the same class as obtains from Minidoka to Wells, Nevada, would not be very helpful to it, would it? (511.)

A. I am not saying that. I said that the general shipments that went over the Wells cut-off isn't beneficial to the shippers; at least they don't consider it so; they would rather take the service that they get on the Short Line around by Salt Lake and back to

260 those points than they would over the cut-off. Now, I don't know whether that is due to your service on that road, or what it is, but that is the way they ship the majority of stuff out of our country.

Mr. ELLIS. You don't understand, Mr. Spencer, that that is the kind of a railroad we are asking for, do you?

Mr. SPENCER. Well, it is certainly the kind that you would have to get. You couldn't—now, you know why they ship around via Ogden, don't you, Mr. Smeed?

A. No; there's several reasons. One of them is, now, a man shipping direct to a packer, for instance, Humphrey & Moffitt's man, had in twenty cars of sheep in June of this year, and they ship them via Salt Lake through our yards to San Francisco. Now, do you think that is cheaper to ship them across here? He shipped them direct to the packer. He shipped them over that route because there wasn't any other route. (512.) He didn't ship via Salt Lake to San Francisco, via that route. He would go to Ogden. Maybe I should have said that route, via Ogden. There is a good market at times at Ogden. That is not the reason why they go via Ogden instead of going via the Wells cut-off where they are going to a packer. A packer don't sell his stuff on the market. The buyers and speculators do but not the packers. This was a packer buyer. I don't know how much of this stuff that we sell goes to the

packers. It is my thought that this packer buyer, even on a single shipment, would absolutely use the best route. The volume of the shipment would not (513) influence that; it will be judged by the service and the shrink and the cost of shipment. With me that would be true whether he has one car or many cars. I don't know how it would be with everybody.

261 Q. (By Mr. SPENCER.) Now, if this California market is the objective, why do you want to go up to—away up to the north and connect up with the Southern Pacific at Crescent Lake? The Southern Pacific and Great Northern are building up to Silver Lake, aren't they, from Klamath Falls?

A. I am not familiar with what they are doing over there, Mr. Spencer.

Q. Well, they could extend that line right up there from the Silver Lake country, couldn't they?

A. They probably could. I don't know whether they could or not. I am not familiar with the railroads. (514.)

Exam. ROGERS. How many miles would that be, Mr. Spencer?

Mr. SPENCER. Well, it would be somewhat shorter than this cross-State line. I don't know how far it would be; probably be—how far would it be across there——

Mr. ELLIS. It would be just about as far as the line we are proposing.

Mr. SPENCER. It would be about forty or fifty miles shorter.

Exam. ROGERS. Is that an option that you are putting to this witness?

Mr. SPENCER. I am asking if San Francisco is the objective why that wouldn't be the proper route and shorter route to San Francisco than one by Crescent Lake?

A. I wouldn't say, because I am not familiar with it.

I didn't mention the markets at Seattle or Tacoma. The slaughter of cattle at Seattle is not larger than at Portland. Portland is considered the livestock market of the Pacific Northwest. (515.)

262 Everything practically comes to Portland now. There used to be quite a bit of stuff diverted at The Dalles and go over to Tacoma, but now practically everything comes in here. Some do go to Carstens, but he buys quite a lot of stuff out of Portland; and the same with Mr. Frye. Frye and Carstens ship up there to the Seattle market. I think according to population the Seattle market as a consuming market should be as great or greater than Portland, although I am not familiar with it. I did not intend to say that our Portland market is limited to fifty cars. Monday is the main livestock day at Portland, where they make the big sales. They ordinarily have in there from fifty to eighty-five cars, and whenever you get up to eighty-five you have got too many. (516.)

As a rule the Portland market can handle from fifty to sixty cars a day, and more than eighty cars would glut the Portland market. It might be that one week you would get away with eighty

cars, but you come back the next week with eighty cars it will invariably take it off; the records show it.

Q. (By Mr. SPENCER.) Well, they handle in the Portland market sixty-five hundred to seventy-two hundred cars a year, don't they?

A. What have you got there? The stockyards' record, or the packers' record?

Q. The stockyards' record.

A. Well, a lot of that stuff went to Tacoma and Seattle.

Q. I know; but that is what I am talking about.

A. I know; but some of that stuff is billed through and stops here at Portland. I am talking about what the Portland market can handle.

Q. I am talking about the north Portland stockyards—what they can handle over there, and that is unloaded into their pen.

263 A. I wouldn't say that, because that isn't the market, because some of that stuff is billed through; some of it, a lot of it (517) probably did go through to California.

Q. There isn't any of it billed through?

A. We bill everything through to Seattle, the same rate.

Q. I was asking you how many cars of livestock came in there to north Portland yard for Monday business, and you said as a maximum about eighty to eighty-five cars, and I am asking you if it isn't more than double that.

A. No. So you won't be misunderstanding me there: I get most of my dope from the commission men out there; the Sevier commission men would bear a pretty good reputation, and when they wired me that eighty to eighty-five cars is too many cars on that market I believe them.

Q. That is the practice, isn't it, as a matter of fact, before you ship in you get in touch with your commission man over there to find how much the market will stand, and you arrange amongst yourselves to ship accordingly?

A. Largely, that is true.

Q. It has been the practice for several years?

A. But we can't always follow that practice.

Q. But you attempt to?

A. We try to.

From Jordan Valley to the shipping point at Murphy (518) is approximately seventy-five to eighty miles. Murphy is on the Murphy branch. The Homedale branch is not the nearest shipping point. It is a little bit further. It isn't quite as steep a trail, but it is drier. There is no water much on the Homedale branch.

264 All of that business comes into the main line at Nyssa. Caldwell is east of Nyssa and west of Nampa, nine miles west of Nampa.

Q. Now, you say fifty per cent of the hogs would go to California if you could be just encouraged to raise hogs out there in southwestern Idaho?

A. I would say under this new irrigable land going in that I think there would possibly be an increase of fifty per cent. You understand that I am not hiding the Short Line; I am (519) simply trying to build up and open up our country over there and help the Short Line to live, make money for it.

As a matter of fact, hogs are shipped right into this north Portland market right now from Nebraska. And they ship in to Los Angeles from back there. They also ship into San Francisco Bay cities. Whenever the hogs get a little high for the packers down there, they just load up eight or ten cars down in the eastern markets, in Colorado, and come out here and break this market. Now, this year in June they broke our hog market at Portland a dollar and a half in one week. Now, when you have hogs on feed, such as in our country there, there is a certain time to market those hogs at about a certain weight, if these fellows don't cut you, or if they are heavier than that it will cut you in the prices.

The building of the cross-State line would (520) not dissuade these packers from counting that attitude. I don't know whether the Utah packers ship hogs from Nebraska and Colorado. They probably do. At times Oregon and Washington, California, Utah, all of these Western States, draw on the east for hogs from the Mexican line clear up to the British Columbia line. (521.)

265 I did not testify that there is a shrink of $68.00 per car. I said a shrink of one per cent. There is a loss of $68.00 per car somewhere. That is the feed bill and shrink which occurs from any point, whenever you add 400 miles onto the distance. You load the cattle at Caldwell and ship to Portland—you will get anywhere from 15 to 60 pounds per head shrink; it is according to what kind of a bill you get in Portland, what kind of a run you get on the road; but if you had to ship those cattle on two more feeds, that would be approximately six to eight hundred miles, according to your railroad and the service you got over it, you would still have another additional shrink, but it wouldn't be in accordance with your first shrink. Your (522) first shrink is the greatest. I have based it on three per cent, to be sure, and your feed will be around one and a half, and the next feed will take off one per cent, because the farther you go, you understand, the tireder your stock get, and they don't get rested up, and consequently they lie in the yards instead of eating and drinking and filling up.

Q. All right. Now, from Caldwell, Idaho, to San Francisco by the route that you now use through Ogden, as I understand it, would that be $68.00, the same as to Portland, in shrink and feeding?

A. No; we ain't figuring this to Portland. We are figuring this to San Francisco by the present route.

Q. What is it?

A. We base these figures on the present route to San Francisco. We don't base them on Portland.

Q. How many miles is it by the present route from Caldwell to San Francisco?

266 A. The present route?

Q. Yes.

A. I don't know the number of miles. I base my claims on the number of feeds and the time it takes to make the run.

Q. Well, where does the 400 miles come in, then?

A. This proposed road would cut off 400 miles of distance (523) between Caldwell—our country up there, Boise Valley, and eastern Oregon, off of the route that we now have going by Ogden to San Francisco or coming around by north Portland and down the other way.

Q. How much would it cut off from the Rogerson-Wells route to San Francisco?

A. I don't know.

Q. You have never taken occasion to take that up?

A. It isn't practical; no; it isn't practicable at this time to ship over the Rogerson-Wells cut-off.

Q. In other words, I understand, you figure if you reduce your distance to San Francisco market 400 miles under what it is now you would save $68.00 per car?

A. With the same service that we get over the other roads. As a rule we ship through to the north Portland market from Caldwell without unloading for feed and water. We don't always, though. (524.)

I said that hay in California was worth $22.50 a ton aboard the car. They buy it by the carload, delivered in Los Angeles, anywhere in Los Angeles, or points close for these dairymen, at $22.50, and more. I am in that business. I have to bear the freight charges out of the $22.50.

267 Redirect examination:

In discussing this saving of $68.00 per car, I did not give any consideration at all to the possible saving in freight charges due to shortening of haul. That is based on two additional feeds and shrink. Here is the main issue that I bring out in that particular item there: We will take it on from here to Omaha, for instance, and I load to-day, we will say, at Heppner. Say they tie me up in Heppner Junction for six hours, so I am delayed in that long run one day to the market. I am basing my market on when I load my stuff as to when they should arrive to be sold in Omaha (525) or Kansas City, or vice versa, if we ship it from here to San Francisco, and if I am a day late it may mean a loss of 50 cents a hundred on that stuff. Now, I am not taking that into consideration in these figures at all. I am simply taking the additional feed bills, the additional shrinkage that you have in the longer distances; that is all that is taken in in here.

Q. And to really determine how much more valuable your live-stock would be with the cross-State line you would have to add to

this $68.00 figure such saving as might result in freight charges and such additional return as you might receive due to reaching your market quicker?

A. Well, now, I wouldn't be positive about that. I got this partially from the Oregon Short Line, so that—I depended on our bookkeeper with the information that he gathered to figure that out, but if I have this correctly that is based o nthe feed bill at the additional shrink.

Q. I am quite sure you are right. I don't think anyone has ever——

A. I don't want to be unfair there. The feed on a car of
268 cattle is around $8.00 each feed point, so two feeding points would be in the neighborhood of $16.00. The one per cent shrink on—the minimum on a carload of cattle is 30,000 pounds. Now, if you were receiving on the market, we will say, at the present time 12 cents, that is, taking the best price of steers (526), 12 cents, you would have a losing of one per cent on a 30,000-pound car; you can easily verify my figures there.

The difference in freight rate on a car of cattle to Portland as against San Francisco—it is $233.00 to San Francisco and it is $119.00 to Portland, I believe, or $119.50 less the sanding charge. I think that is correct. That is from Caldwell.

With reference to my testimony about breaking the market on hogs, Mr. Spencer asked me if the cross-State line would change the attitude of the packers. As to what effect the cross-State line would have on our ability to raise hogs and protect ourselves against that condition of having the market broken, it is the same condition you would have of wheat. If you had one miller to sell all your wheat to, you would have to depend on him for your market. If you had three millers to sell your wheat to, why, you might get a little variation in price there. Now, it is the same thing on the hog market. If you have only got Portland to come to—Portland and Seattle are never to my knowledge, anyway, over ten or fifteen cents difference, and I think you get that taken up—you get a (527) better bill at Portland than you do at Seattle.

Q. Would it mean this, that in your opinion, while the packers might break one market it would be more difficult to break them all at the same time?

A. They wouldn't break them if the supply wasn't there.
269 Q. Now, has that thing, however, that condition of which you speak, the breaking of the market, discouraged the production of hogs to any extent in your territory?

A. Yes; it has, because there is—I feed a good many hogs myself, and I am very careful about watching to see how many hogs is on feed to this coast market. There's times of the year, however, when we can go to San Francisco or Los Angeles with our hogs, even, and pay the additional expense and feed over coming to Portland with them.

We have some heavy grades to ship our cattle over at the present time, in shipping to Portland. We have a double-header out of Huntington, and if you want to go up over the Wells cut-off you have got the King Hill to pull up the other way. Assuming that the Short Line did not improve its Crane branch very much, I think there would be a big difference in the character of haul. There are a lot of short turns in that road. I think there would be quite a difference. After you get to Crane the line is up on the plateau (528) out of the canyon. And from there west the territory traversed is generally level and the character of line would be very desirable for the shipment of livestock as near as I understand the route. I have been across that country but not over what might be the survey. There may be a survey made there that goes some certain way that I don't know about. When we ship livestock to San Francisco at the present time we have some pretty long, steep grades to ship over, too. I wouldn't say that the grades are any worse than they would be over some other road. I don't know. Referring to the route from Idaho to Portland and comparing it with the route from Idaho to
270 San Francisco, I don't think (529) outside of the distance there would be so very much difference.

I am not a railroad engineer, but I would think that the road from Ontario to Burns could be straightened out sufficiently to run heavy trains over it. The Oregon Short Line is double-tracking some parts of its main line through Idaho. I guess it is the intention to double-track more of it.

Recross-examination:

Q. (By Mr. DEY.) Mr. Smeed, if your extra expense is $68.00 on an additional haul of 400 miles, what is the extra expense on an additional haul of 120 miles? (531.)

A. Well, now, that would depend. That would depend on what end it was on. If you were going into market and you could make it with the 120 miles—for instance, you must not keep your stock on the car over 36 hours. Now, you might be able to make that additional 120 miles in that time. But in shipping fat stuff to market we don't like to keep them on over 28 hours to 30 hours, but we do sometimes keep them on practically the full 36 hours. So I would not be able to answer your question there. It would all depend on your conditions, and just how much time you had in your movement to get that stuff there.

Q. Well, you could say, though as a general proposition, that an additional haul of 120 miles would involve a great deal less expense than an additional haul of 400 miles?

A. Oh, I would think so.

Comr. MCMANAMY. Is it customary for stock shippers when they make a shipment to sign the 36-hour release?

A. Yes; if we expect to get anywhere around the limit, I think, we get the best results to sign the 36-hour release when we bill them out.

Comr. McMANAMY. As I understand you, Mr. Smeed, the
271 relative number of stock on ranches and farms and ranges is changing somewhat; that is, a greater per cent of them are raised on small ranches and farms than on the open ranges? (532.)

A. No; I didn't say that. I said there is an increase now on the ranches to what there was four or five years ago, but there has been a decrease on the ranges.

Comr. McMANAMY. That would change the ratio, wouldn't it?

A. The ratio has been so much more on the ranges than there has been on the ranches. That is due to the fact our country is becoming quite a dairy center and consequently there is from 20 to as high as 120 cows on a place on those farms where there didn't use to be.

Comr. McMANAMY. That would result in a greater number of cattle being raised on the farms and ranches in the future?

A. Yes, sir.

Cmr. McMANAMY. You expect a substantial increase from that direction?

A. Yes, sir——

Comr. McMANAMY. In routing stock to San Francisco do you know whether or not the shipper routes them via the Rogerson-Wells cut-off?

A. Well, I know a good many that don't. I would not say that every one didn't, but there is a good many that ship that don't.

Comr. McMANAMY. It is not general to route them that way?

A. No, sir.

Comr. McMANAMY. Well, do you know why?

A. Well, there are two reasons. One reason is that they
272 don't (533) have the train service over the Wells-Rogerson cut-off—I suppose due to the fact that the traffic is not there; I would not say; and another reason is that when you go by Ogden there is a chance, if you are shipping to market and not shipping direct to a packer, that you might strike some eastern buyer there that would give more for them to go east than they would to go to San Francisco, at certain times of the year.

Comr. McMANAMY. Do you know whether or not any complaint has ever been made to the Interstate Commerce Commission concerning the service over the Rogerson-Wells cut-off?

A. I don't know.

Exam. ROGERS. Mr. Smeed, when you ship your own livestock do you specify the routing?

A. Yes, sir; that is, to eastern points oftentimes the railroad routes them, that is, our agent there. Of course, we have that privilege and we can route them any way we want to, but they naturally—if you didn't route them, for instance, when you billed them out they would give you the best possible routing over their lines.

Exam. ROGERS. Well, what is your practice, to route them yourself or to leave the routing to the agent?

A. Well, my practice has been to leave it generally to the agent, because we generally ship to Denver, Omaha, sometimes St. Joe. But lots of shippers do designate the routing, I (534) think, due to the fact that oftentimes those eastern lines have men out here after the business and they try to get them to route them over their lines.

Comr. MCMANAMY. Well, located as you are, on the Union Pacific system, shipping to Ogden, Denver, Omaha, or St. Joe,
273 there would not be much chance to specify routing?

A. Well, there is a chance.

Comr. MCMANAMY. It all goes over the same line, doesn't it?

A. Practically so. I think after they get down in Wyoming, around Laramie, I think there is a diversion there. It just depends on where you want to go.

274 H. J. OTTENHEIMER was thereupon produced as a witness on behalf of the complainants, and having been duly sworn testified as follows:

Direct examination:

I reside in Portland. (535.) I am in the wholesale woolen and trimming business. I have been a resident of Portland about twenty-five years. I am at the present time a director of the Portland Chamber of Commerce. The Portland Chamber of Commerce has intervened in this case in support of the request for a cross-State line. In appearing at this hearing I am appearing on behalf of the Portland Chamber of Commerce as an intervener. At the request of the public service commission, the Portland Chamber of Commerce, through its statisticians, have compiled certain statistics; for instance, a table of statistics of the population of Malheur, Harney, Grant, Lake, Crook, Klamath, and Deschutes Counties; second, area of the above counties in square miles; third, number of farms in each of above counties and the aggregate area in acres now being farmed, also average acreage per farm in each county; fourth, production by counties for past four or five years in principal commodities; fifth, possibility of increased production (536) by commodities, particularly as stimulated by the proposed railroad; sixth, location and amount of subterranean supplies of water in various counties that can be made available for domestic, livestock, and other purposes, by drilling, etc.; seventh, estimates of raw and unused lands in counties that will be opened up by the proposed railroad; eighth, possibilities of increased population per county and number of farms that might be expected by building of railroad. I have also supplied maps of the State of Oregon showing the existing lines of railroads with the principal cities and towns of the main and branch
275 lines of the railroad, likewise maps of Washington with the same data. These are the maps to be submitted [producing maps]. I think the data is on the face of them typewritten—benefits

which, it is believed, will accrue not only to the city of Portland but to the State as a whole from the construction of the proposed line westward from Crane. This information was compiled under my general direction. (537.) I have it in the form of a report.

(The statement referred to was received in evidence, marked "Exhibit No. 15, Witness Ottenheimer.")

With reference to the first table on page 3 of Exhibit No. 15, data showing the area in square miles, we show the area in square miles of the territory tributary to this railroad to be about 43,000 square miles, with a population, according to the United States census of 1920, of approximately 50,000 people, divided as per that sheet. Page 3 includes only counties east of the Cascade Range that would be considered tributary to and benefited by the cross-State line. (538.) I have included no counties not immediately adjacent to the line that might receive indirect benefits. This does not include anything in western Oregon, or anything not absolutely adjacent to and tributary to the proposed line. The development of farming in this area is practically at a standstill. The records show that from 1920 to 1925 there has been practically no increase in the aggregate.

The information shown on pages 4, 5, and 6 of Exhibit 15 was gathered by our statistician from Government records and State records and other records that were available; likewise through using the figures of the Oregon Agricultural College, wher-
276 ever available. There is nothing in connection with the crop and livestock data shown on pages 4, 5, and 6 that I would like to explain or elaborate on in any way. I think in point of statistics they are sufficient. (539.) The figures on page 7 were obtained through Mr. Teutsch, whose services were used to that extent. Page 8 is an index of the succeeding charts. Page 9 is the result of an investigation, I understand, that was made by Mr. Waring, of the United States Geological Survey, showing the available water supply in that section. Investigation shows that there is water beneath the surface in that territory at various points in Harney Basin, Alvord Basin, Catlow Basin. Likewise farmers have been interviewed in the various localities there. As to recent information received from ranchers, at Wagontire L. J. Adington has a six by eight foot dug well, 15 feet deep. The water rises to within three feet of the top. (540.) Wagontire is west of Crane, almost probably midway between Crane and Crescent in central Oregon. I think that is out on a portion of the territory referred to by Mr. Spencer as a high desert. The next well is also at Wagontire. I have not made any investigation of this personally. This was done under my direction at the chamber. (541.) As to page 16 we went to considerable trouble to check up the various distances at the points shown, with the result that we found quite a number of variations; that is to say, savings between the proposed route and the present means of communication. As to the basis for the estimates used on page 16, we had a statistician check up very thoroughly, in conjunction with the Oregon

Agricultural College, in arriving at these various amounts,
277 computation. The same would apply to page 17. (543.) I have already explained page 16. They took the map and took the approximate distance of 50 miles on each side of the proposed line and estimated (544) the area.

I think a rail line constructed through the central Oregon territory would undoubtedly render service to an area 50 miles on either side of the line. I have made calculations to determine how much shorter the distance to Portland from any point in that area would be. On page 17 we checked various distances; from Burns to Portland via the Union Pacific, under the present route, also via the proposed line, showing a saving in distance of 183 miles between Burns and Portland. Burns to Klamath Falls, via rail under the existing line, is 780 miles; under the proposed line 291 miles, making a saving of 489 miles. Burns to Salem, the present route is 640 miles, the proposed route 351, a saving of 289 miles. Burns to Bend by rail under the existing road is 633 miles, via the proposed line 234, making a saving of 399 miles. Those figures all appear in the exhibit.

I think the timber statistics on page 22 are self-evident. (545.) Our statistician got those figures, I think, through the lumbermen's association, and so forth. They have means of checking up that.

In connection with the last page of the exhibit I might say here that Portland is concerned in the matter of this new road because they are apprehensive that unless the Union Pacific does build this road from Crane to a junction with the Southern Pacific at or near
Odell, the tendency of the Southern Pacific will be to build
278 northward from Lakeview. In that event the trade influence will be toward San Francisco. We are interested in seeing the trade of the sphere of influence headed towards Portland. We are interested primarily in the development of Oregon rather than in California. We feel that we have in what is known as central Oregon an empire of probably 30,000 square miles that are not adequately served with a railroad, and that it is essential to the development of Oregon that a road be built across the State. As to what extent we are able to maintain trade relations at the present time with central Oregon—with Burns, Crane, and that area, as the table of distances indicates, it is quite a long route and we are in competition with points like Boise, Idaho (546), and other points, that, with the building of this cut-off, we feel would bring us closer to that territory. We believe it would develop along the route of what they term the high desert; that there will be a development there, just as there has been in other places that at times looked like barren deserts, and so forth, but with the advent of railroads they have developed and farms have sprung up right and left. We think that development with direct rail facilities to western Oregon would accrue to the advantage of Portland. I would not say we would object to any plan of railroad development

that would make central and southwestern Oregon a trade territory which would more logically go to San Francisco Bay points, but naturally we would prefer to see that big territory tributary to Portland.

I have lived in Oregon the greater portion of my active business life. I am familiar with the State of Washington. In a general way I know what the transportation service is that
279 serves (547) the State of Washington. Coming into the State from the East they have the transcontinental lines of the Chicago, Milwaukee & St. Paul, the Great Northern, and Northern Pacific; and the S. P. & S. Railroad from Spokane. I think I am familiar with the rate of development in the Northwest. Washington is developing by far more rapidly than Oregon. I am inclined to believe that Oregon is the richest in potential wealth, mineral, timber, and so forth. I think the activities in the early days of the railroads in Washington were instrumental in bringing it to the front. I am afraid if Oregon does not secure more adequate transportation service it will continue to lag behind the development of other Western States. (548.) The lack of railroad service is what we are trying to overcome in this hearing.

(The two maps were thereupon attached to and made a part of Exhibit No. 15, witness Ottenheimer.)

I think the date of the map is 1927. (549.) I am not sure. The map I now have is of the State of Washington. It shows the lines of the railroads in Washington, and we have checked the principal cities in blue and the towns along the main and branch lines, and particularly at the junctions.

We have outlined in blue on the map of Oregon the approximate route of the proposed cross State line; also of the Great Northern line from Bend to Klamath Falls which has since been built. (550.) The blue check marks on the map are the principal cities. The comparison I want to draw from the two maps is the discrepancy in the development of the cities, the State of Washington showing a great number of cities where they are rather scant in Oregon.

280 Cross-examination:

I have been through parts of this central Oregon country myself, through from Bend to Prineville, as far as Millican, Christmas Lake, Paisley, Lakeview. I have never made a trip from Bend to Burns. It has been 10 years since I was down to Paisley and Lakeview; to be exact, I will say 1915. I went by automobile through that country to California. There were some homesteaders and some abandoned homesteads. (551.)

Since 1915 there have been several hundred miles of railroad constructed into central Oregon and through the western part of central Oregon between Bend and Klamath Falls.

I do give it as my opinion that a line in a country like that will serve a territory for a distance of 50 miles.

Q. Now the Natron cut-off has been completed for about two years, and the Bend-Klamath Falls line of the Great Northern has been open for several months. Do you know how far it is from Fort Rock and this great Christmas Lake Valley to the Natron cut-off, or to the Great Northern?

A. I know approximately; it is further than 20 miles to the Great Northern line. I have not got the map with the sections on it. Exhibit 15, the Rand-McNally map, shows the approximate location of the Great Northern line down from Bend. (552.) That line was not put on the map by an engineer. I have just drawn a straight line from Bend down to Chemult as showing the approximate location of the line.

In reaching that line, going west from Ft. Rock, you cross about five or six sections or townships.

281 Q. Diagonally we will go across here and connect with the Great Northern on the cross-State line route, and how far is it?

A. In an air line about twenty-five miles, I should say.

Q. All right; twenty-five miles. Now according to your theory, then, Fort Rock is served by two railroads now. Is that right?

A. Yes. But that would depend on the topography of the country there, whether it is accessible straight across in the direction you have indicated. (553.)

Q. You can drive across there—isn't that true—if the State would give it some roads?

A. No; there are no roads across that way. When I say tributary, I refer to the fact that there are roads as a rule along the line of this railroad, or into valleys that are accessible.

Q. Isn't there a road that goes right down alongside of the Great Northern survey, the Great Northern construction, and one that branches off over to Fort Rock? Fort Rock is the only place where you do reach the highway, isn't it?

A. That is the road coming in from Lapine?

Q. Yes; that is right. And Lapine is on the fine new State highway that has been built from Bend to Klamath Falls, to a great extent. Isn't that true?

A. Yes, sir.

Q. The Dalles-California Highway?

A. Yes.

Q. And it can go there and hook up with that highway and take the Southern Pacific or the Great Northern, just as it likes?

A. By driving to that point.

Q. By driving, say, twenty miles, or twenty-five miles. Isn't that right?

282 A. That is approximately right.

Q. Yes. Now you were talking about the subterranean find that the geologists made in 1909 for water under Christmas Lake

(554) Valley and Fort Rock. Is that the location you had reference to?

A. Well, in those various basins. There was Harney Basin——

Q. Well, we are talking about Fort Rock now. What is the condition there at present? I mean, there is no water there, unless you go down for it by drilling wells. Isn't that right?

A. You have to drill for water there.

Q. Yes. And you are suggesting that as a district to support a railroad. Now at Summer Lake you don't have to drill for water, do you?

A. I am not particularly conversant with that. I know I passed at Summer Lake and saw some very prosperous farms in that district. Likewise I know that at Fort Rock as many as ten or fifteen years ago, when I was in the mail-order business, we had a great many customers that went up into the Fort Rock country, friends from Salem that went up into that Fort Rock country and farmed a great many years, and they left, gave it up because of the lack of transportation, said there was no railroad facility. (555.)

I know there are irrigation districts upon which the State has expended large sums of money at Silver Lake, Summer Lake, Warm Springs, and Ochoco. As to whether they are in such distress
283 that they have been unable to pay their current interest and the State has advanced it to them to the extent of approximately four million dollars—I am not ready to concede that irrigation is not a success in the State of Oregon. I am not ready to concede for a moment that this State can not raise as fine crops as the State of (556) Washington or any other place. It is probably due to management or something of that kind. I am not competent to state anything as to whether that is the condition with respect to those projects, that their bonds are now practically valueless in the hands of good-faith holders who have expended their money for them, except that it has been a matter of public discussion with headlines in the papers, of concern to all the people, of the chamber of commerce, and of the State and legislature, so that in the last session of the legislature a commission was appointed to report on it and suggest means whereby it might be relieved.

Mr. DUNCAN. And may I suggest, Mr. Spencer, that is one of the purposes of this hearing, to relieve that condition?

Mr. SPENCER. Yes; I have no doubt.

Q. And yet, with that condition, you are suggesting seriously, as a business man, another project that requires the use of the (557) drill and the well in order to put additional lands on the market?

A. I am advocating the building of a railroad. I have gone through the same thing—even in California I remember many, many years ago the railroads took the same stand. They would not build. The merchants built the road. Afterwards it was taken over by Spreckels, and the railroads acquired that, and that is now in the

San Joaquin Valley, one of the most prosperous in California to-day.

284 Q. And one of the richest valleys perhaps in the world?

A. Yes.

Q. Great depth of soil?

A. And they had just as hard a time getting the railroads in the early days in California as we have in Oregon.

Q. But they had deep silk soil, whereas in the Christmas Lake Valley you are talking about it is hardpan, is it not, and frost?

A. Probably.

I say this road will serve Deschutes County. That county is now served by the O.-W. R. & N., the S. P. & S., and the Great Northern Railroads. (558.) The eastern part of this county is tributary to the cross-State line. I could not say whether that part of it consists of pumice soil supporting a little jack pine and that that is about all.

Q. There is not any town down there that would go to this cross-State line when they can go to Bend, is there?

A. They might possibly. The building of a road might create new towns on the line of that road that would better serve those people than driving to Bend.

Q. You think there are any town sites very attractive over there?

A. They would be if the railroad would make the proper development, judging by some of the country I have seen in the past where there were no towns that when the railroads served them sprung up.

Q. In any event, there are three railroads now in there, and four if you count the Southern Pacific, are there not?

A. That serve the town of Bend?

285 Q. Deschutes County.

A. In one part—the Southern Pacific does not serve Deschutes County. (559.)

Q. Well, it is within fifty miles of it, isn't it?

A. Yes; on that point. Yes.

As to how Klamath County is served by the cross-State line—the proposed road goes through the northern part of Klamath County. The central and southern part of that county will not be served except by the fact that Klamath County would utilize that road. It is 75 to 100 miles from Klamath Falls to the junction of the proposed road.

Crook County is immediately north of the cross-State line. There is some of the population of that county that could reach this line (560)—the population at Fife, Burns, Suplee, and Paulina. That is along the drainage of the Crooked River west of Prineville. I have been through part of that country beyond Prineville a short ways. I have never attempted to go from down on the desert up into that drainage of the Crooked River, nor up on that Blue Mountain Range.

Now whether Lake County has got anything to contribute to the cross-State line, with the development of those soda beds at Alkali

Lake and in that neighborhood, there is a big potential freight there. This is mentioned in the reports submitted to the chamber of commerce (Exhibit 15) (561) under the heading "Raw materials supplies which will be made available by the construction of the proposed railway line from Crane."

This Alkali Lake, containing an estimated three million tons of soda, lies approximately 20 miles south of the line. The mar-
286 ket for that three million tons of soda would be with the chemical company in San Francisco. I could not say how many train loads a year that would make, but with the development of the railroad those things always take care of themselves. I am pretty sure that if the question is met there will be a demand. There is a great demand for soda.

Q. There, too, the proper way to go out with that, then, if it is going down to San Francisco, is to extend the Lakeview branch of the Southern Pacific, isn't it?

A. Not necessarily. As I said to you before, the chamber of commerce and the city of Portland would prefer to see that (562) connection made so it would come and meet the Southern Pacific at or near Odell Lake.

A market in Portland might be developed for it. We didn't contemplate hauling that up to Portland; we were going to haul that to Odell Lake and then down to San Francisco unless in the meantime chemical works were started at Portland, which is not at all improbable.

Q. What is going to become of the production in California at Searles Lake that is now supplying excessively the California market?

A. Well, I can't agree with you, Mr. Spencer, as I sat here and listened to your line of reasoning, applying, that there should not be any competition at all. Your theory apparently, as I sat here listening, is if a country has one service why have any more? If we have a gas station at a corner here serving you, why have another? In this State we want the service. Besides, there is the competition produced by the growth of cities, and Portland is striving and reaching out for factories. We have the great export trade developing in China, and with the opening up of this country, opening up
287 the big deposits, like soda, there would be development of a great chemical work in Portland just as your Searles Lake in California created them there in San Francisco, and these (563) things can not be developed without the aid of railroads.

Q. And you want the railroad to extend its field of activity and go into another one and see if it does not develop this as you expect it will. Is that right?

A. I want to see the railroads develop the State of Oregon, especially with this cross-State line, opening up this section.

Q. Now, I notice you treat Grant County, too, as being tributary to this line. How is Grant County served now?

A. Well, Grant County is a very large county.

Q. It is in the Blue Mountains there and served by a railroad that extends from Baker down through to Canyon City—to Prairie City, rather, doesn't it?

A. The railroad does not go to Canyon City.

Q. No. What is going to become of the business that sustains that road?

A. Now, do I understand, Mr. Spencer, you claim Prairie City and Canyon City are now on the line of the railroad?

Q. No; I claim Prairie City is on the line of the Sumpter Valley Railroad.

Mr. DUNCAN. A narrow-gauge railroad.

The WITNESS. On the narrow gauge.

Mr. SPENCER. Sure.

Q. (By Mr. SPENCER.) I am wondering how you figure that this (564) Grant County country is going to sustain this cross-State line, contribute in a material way to its support?

A. The trade that would develop tending southwards to Burns, as far as Crane.

288 I mention Malheur; Malheur County is on the main line of the Oregon Short Line and on the existing Burns branch. It is between Harney and the Idaho line.

Q. And you say it carries on its trade perhaps largely with the interior cities, such as southern Idaho cities and Boise and Salt Lake and Ogden. Is that true?

A. Portland. The city of Portland has quite some trade interests in there and do considerable business in competition with those places you mention.

Q. It does. How long has it enjoyed that business?

A. Oh, since the very early days.

On pages 17 and 18 of my exhibit are shown certain mileages (565), and the distance from Bend to Odell is placed at 45 miles. I do not know where that is taken from. In going from Burns to Bend by way of this new proposed route you would use the Great Northern from Bend south. And traffic moving across the high desert over to the Great Northern would necessarily have to be transferred to the Gerat Northern where the cross-State line crosses the Great Northern. I do not know the length of the Great Northern mileage from Bend down to Chemult, where it connects with the Natron cut-off.

Q. Well, it is about 60 or 65 miles, and your proposed cross-State line crosses the Great Northern about 10 miles north of Chemult, so that your figure there, I wanted to show, would be at least 55 miles instead of 45, and, of course, whoever prepared this is not here for cross-examination, but I wanted to show the inaccuracy of at least some of these figures here on some of these commodities. (566.)

289 A. Mr. Dey, doesn't it say under Bend to Odell "Est."—estimated?

Q. Yes.

A. Yes; because we didn't have the accurate figures of that.

The second group of figures on page 17 of my exhibit are also estimated. That is not true of all the figures through there, but only when the exhibit says they are estimated. (567.) The exhibit shows Odell Lake to Portland 215 miles. The connecting point here is at Crescent Lake, some distance south of Odell; and as to whether the correct distance there would be about 232 miles instead of 215. I know nothing of the accuracy of these figures of my own knowledge; I asked that they be compiled.

I said there were some thirty thousand miles in Oregon that were not now adequately served by railroad and I was referring to that general country known as what we have called east and central Oregon. The area that is included within the thirty thousand miles may be defined as all that territory south of the Blue Mountains, between the Cascade Mountain Range on the west and the Idaho State line on the east, and Nevada on the south. That will take in portions of Deschutes, Klamath, Crook, Lake, Grant, Harney (568), Malheur, and Wheeler Counties.

On page 1 of my exhibit it is stated that the data "contained in this report is for the most part in conformity with the memorandum of data required by the public service commission," but the word "required" should be "requested."

The Portland Chamber of Commerce entered into this proceeding through the act of its board of directors. The proposition of the Portland Chamber of Commerce intervening in this proceeding was initiated by the chamber's board of directors. I could
290 not say whether the board of directors took this matter up with the public service commission, or whether the public service commission took the matter up with the board. I wasn't on the board at that time. (569.)

Redirect examination:

I spoke of Portland having had certain trade relations with Harney and Grant Counties and other interior points over a number of years. It is a fact that those trade relationships originated before the rail construction and at the time when all of the freight was hauled in and out of that country by wagons. It dates back prior to 50 years ago.

It is my thought that owing to the (570) existing circuitous routes we do not have the trade advantages in central Oregon and Grant County and Harney County that we should have. In referring to the fact that many of these counties would receive benefit from this line, I did not mean to suggest that the cross-State line would provide their only rail facilities, but that it would add materially to their means of outlet.

Q. Mr. Spencer has endeavored to get you to approve a haul from a point on the Great Northern line between Bend and Klamath Falls across into the Fort Rock section, and suggested that the distance was somewhat shorter, around twenty miles, I believe, he stated. Do you know whether or not there is a physical barrier which prevents the Fort Rock area from getting easy access to that line?

A. My recollection is that it is a mountainous, hilly country there, that is impassable as far as a road is concerned from Fort Rock over towards that road.

Mr. ELLIS. The Walker Mountain Range separates the Fort Rock Valley from the railroad that Mr. Spencer referred to. (571.)

291 Recross-examination:

The present road to Lapine does not go right over the same hill that I said is impassable; I think it goes considerably north of that.

I have a State highway map that I am willing to put in evidence. This is a road map issued by the Portland Chamber of Commerce State highway department, 1928. Now the main road through Fort Rock extends from Lapine down to Lakeview. That is the way you would go if you were going down to Lakeview; you would leave Bend, go over to Lapine, then over to Fort Rock, then down to Lakeview. There is shown on the map another road that swings from this road between Lapine and Fort Rock over to Crescent, but I am not familiar with that road. (572.) I think it swings from mile post 38. I think that is 38 miles south of Bend.

(Thereupon said map was offered and received in evidence, marked "Exhibit No. 15, Witness Ottenheimer.")

In listing the areas in the State of Oregon not adequately served with railroad facilities, I did not mean to be understood that that was the only area in the State that was not adequately served, but just one portion.

Now about the area of the State lying between Bend and Albany by way of the Santiam and the Hogg Pass, I do not think that is adequately served with transportation at the present time. (573.) And there is a vast potential tonnage in that country, consisting of ripe timber, ready for market; and it needs additional railroad transportation for the purpose of moving that timber to market.

292 WILLIAM L. TEUTSCH was thereupon recalled, and having been previously sworn further testified as follows:

Cross-examination:

My present connection with the Oregon Agricultural College or Oregon State College is assistant county agent leader. I have been in that position for two years (574) but have been with the extension service a little over seven years. During that seven years I have resided at Lakeview and at Corvallis. Prior to that connection I was a farm boy in eastern Oregon in Malheur County. I am 31 years old. From Malheur County I went to Lakeview. During the in-

tervening years I spent some time in Umatilla County on wheat ranches, and then to the Oregon Agricultural College, then to the war, and later came back and graduated from the agricultural college, and from there I went to Lake County as county agricultural agent.

I have never been employed by a railroad company to estimate railroad tonnage or to locate for possible railroad development, but I have estimated tonnage while I was county agent of Lake County, and testified, presenting that data in a hearing (575) in 1923, and I appeared here a few years ago in the prior cross-State case.

Q. But the point I am attempting to ascertain is whether you have ever had any experience to determine how far you can go north, east, south, and west and bring tonnage to a railroad line.

A. Why, I have certainly observed the distances that we have had to move tonnage in order to get them to certain railroad lines in the State of Oregon, both as a farmer and as a professional man engaged in agricultural work. And I have noticed that that distance has been from a few miles up to 150 or more miles.

293 As to whether I have ever determined how far certain commodities will ship, for instance, how far hay will stand shipment as far as the rate is concerned, that would depend, I should think, very largely upon the rate and upon the cost of the production of hay, that is, the cost of production and the cost of transportation. (576.) The load per car is about 12 tons; that is the average loading on the O.-W. R. & N. And you have got to have a rate that is rather low to move it any considerable distance.

The estimate shown on page 4 of my exhibit (Exhibit No. 1) from Malheur County, present tonnage 23,050 tons, additional potential tonnage within the next few years, 64,357 tons, is all westbound. I would not say that the present tonnage there set forth is all the tonnage that does move westbound now from that county; I do not know whether it is all the tonnage which moves westbound. But in any event I contemplate if this cross-State line is built, that it will take that route instead of the route now obtaining from Ontario to Portland. (577.)

As to whether a railroad is an institution of growth or not, whether it improves with traffic density, it should improve with traffic density. We would put a better railroad across the State of Oregon and divert this tonnage to it that now moves from Ontario to Portland via the O.-W. R. & N. and the Oregon Short Line. This tonnage consists of these commodities which I have listed here and that only includes a small percentage of the total tonnage which originates in Malheur County.

Now, sheep—they now largely move east.

Q. And cattle. You say you can move cattle across a branch-line railroad to better advantage than you can if you put it in a livestock special?

A. No. We don't propose to have this a branch-line rail-
294 road, Mr. Spencer, if it is constructed. We propose to handle traffic that originates in western Oregon and traffic westbound that originates in eastern Oregon in (578) sufficient volume to make a railroad out of it. There would be sufficient increase in traffic so that the amount we are taking away from the existing railroads is very small in proportion to the total volume that is moved. It may be true that none of the existing railroads in Oregon make any money; I don't know. I think it is right that they can stand it if they are trimmed up a little bit and divert traffic from them, and could get increased traffic from the development that this construction will bring about.

The hogs [referred to in Exhibit 1] are coming from the irrigated lands of Malheur County. The wheat—that is going to move via the cross-State line instead of via the existing railroads because, as you will note under my Willamette Valley figures, there are several thousand carloads of feed imported into the Willamette Valley for consumption, fed to livestock, (579) annually. There is a need for additional feed supply for livestock and poultry in the Willamette Valley and that volume of tonnage is very large. We propose to supply 50 per cent of this from across the State. This wheat would replace some of this feed tonnage now being used.

Q. What is the fact as to whether or not western Oregon consumes all of the wheat, oats, and barley that it raises now locally?

A. Western Oregon does ship in to various points in proportion——

Q. I am asking you the question whether it consumes what it raises now itself. Doesn't it produce in excess of its own immediate requirements?

295 A. The point is it does do that. On the other hand, it uses a large volume of grain imported. The reason it sells some of this material, moves it in the channels of trade, is that we produce wheat for export in the Willamette Valley; we produce some milling oats and they are shipped out; but if we had a balance between the feeds that are utilized and the grain produced, I believe, we would find that the Willamette Valley produces less than it consumes—that western Oregon produces less than it consumes. Now nobody has such a balance sheet as that.

Q. Who is fixing this balance? Are you fixing it here?

A. What balance?

Q. The balance of the consumption and the production in west-
ern (580) Oregon whereby they are going to continue to ship out grain and fill in what they ship out by production over in Malheur County.

A. No. I am just taking the actual consumption of feeds that we know of in these various counties in western Oregon and replacing that with a little irrigated grain from eastern Oregon. It

is logical that it should be replaced with the irrigated grain. It is only fifty per cent of it at that.

Q. Why go way over to Ontario to get it?

A. Because that is where the surplus is.

Q. That is, of wheat?

A. You will find a surplus of wheat in Ontario. You do now in Malheur County. You do find a surplus of hay there, and you don't find a surplus in Klamath, or you don't find a very large surplus in Deschutes or Crook Counties.

The hay production in Deschutes, Crook, and Klamath Counties is not very large in comparison to other counties in the State. Another point is, there has not been a carry-over of hay, or a
296 surplus of hay in Deschutes or Crook or Klamath Counties (581) for quite a number of years. They have fed it to dairy cattle, lambs, and beef cattle and steers. Crook County produced 40,500 tons of tame hay; Deschutes, 36,750; Klamath, 73,700, as compared to Malheur of 112,200; and we are more than doubling the production by bringing in these new irrigated lands and increase the hay production in Malheur County by 100 per cent—more than that. It is not true that there is not an irrigation district in Oregon, year by year in the last ten years, that has not had carry-over hay. No; that is not true. I have just been through Malheur and Deschutes and Crook and Klamath Counties and I haven't seen but a very small amount of carry-over hay. The hay that is carried over is usually on some old stock ranch. They have got quite a good price for it. (582.) In testifying in Docket No. 17000 of the Interstate Commerce Commission the other day when I was telling of the distressed condition of the farmer, I was talking about the wheat farmer, not about the hay farmer or the irrigated farmer. The wheat farmer is not the irrigated farmer in southern Idaho. The wheat production of the irrigated belt—the increased production we are getting from wheat on these projects which we proposed to bring in irrigation is not enough to offset what three days' hot wind would make in Umatilla County, or the biggest wheat county in the State of Oregon.

Umatilla County produces from 5,500,000 to 5,600,000 bushels, and as to whether that is more than the 10 southwestern Idaho counties produce, I don't have those figures. I would think it would be, but I am not sure about that. (583.)

297 Q. And yet you tell the commission that it is necessary for you to go over here to Malheur to get nine thousand tons of wheat to bring to western Oregon?

A. That is a different class of wheat, if you know anything about wheat. Irrigated wheat is of a low quality, usually does not go for milling purposes and it usually does for feed purposes. Now, then, as to wheat, I used wheat here because I was figuring that they would produce quite a portion of it, but they might produce barley and get a larger yield for it, as long as there is a demand over here. There

is going to be that tonnage here; that is what I maintain, and the tonnage will move westbound.

Q. You have got 227 cars to fill out, notwithstanding the fact you get an excess surplus production in western Oregon?

A. There is not a surplus production of all feed in western Oregon.

Q. All right. Coming to your alfalfa—you were talking about your hay—your say that you can move that 400 or 500 miles all right, and you would have it over there, consumed in western Oregon. Are you going to bring hay from Malheur into western Oregon?

A. Yes, sir.

Q. Well, now, even at higher rates from Klamath Falls or from Hermiston, or Umatilla County. Is that right?

A. We may get an adjustment of rate. (584.)

As a matter of fact, Malheur County has been embargoed for the last seven or eight years. It is afflicted, and practically all of those southern Idaho counties, with the alfalfa weevel. And the best efforts of the most experienced men in their line have as yet
298 developed no way, except a certain character of fly that is brought from the Mediterranean that will exterminate the weevil. In fact the State board of horticulture this year believes it is becoming less and less a problem in Malheur County. The State board of horticulture this year considered removing that embargo on Malheur County hay, and that is not going to continue. (585.)

It is true they have been trying to get the embargo lifted ever since Baker County made its protest five years ago, but the situation has never been as improved as it is now. There has been constant improvement.

Q. The weevil is still there, and they will not be permitted to ship so long as there isn't any weevil in western Oregon. Isn't that true? (586.)

A. Well, now, I don't know that that is going to be the case. We don't know whether the weevil is going to be as serious in western Oregon as in that high-altitude country. Now, if it isn't, if they find the weevil doesn't live in western Oregon, why, they will probably permit shipments here. Now, maybe research will develop that point.

When I made this estimate and put forward the shipment of hay in volume over the cross-State line from Malheur County, I was perfectly conversant and familiar with the fact that shipment has been prohibited for the last seven or eight years and that the weevil is still there. I was also conversant with the fact that livestock shipments from Nampa, from Huntington east, had to be stopped at Huntington and unloaded, and I heard you [Mr. Spencer] say that the shipments went right straight on through, because of the alfalfa weevil, the other day. In other words, you wrote into the record that the shipments of livestock originating at Nampa went right straight through to Portland. The fact is that they

299 are unloaded (587) at Huntington and those cars are cleaned and that stuff is burned there, in order to protect the spreading of the alfalfa weevil. The State board of horticulture started that in there. Mr. H. H. Witherspoon told me that, and I know they have employed a man on the job there permanently for the last seven or eight years; that is, at Huntington, to clean the cars.

Q. And you say they unload the stock? That is your information, is it?

A. Yes, sir; that is what Mr. Witherspoon told me, and that is the provision of the quarantine.

Q. It isn't done, anyway.

A. It has been done.

Q. It goes through without an unloading from Nampa to Portland.

A. It has been done.

Q. Yes?

A. I know it has been done.

Q. But your information is that they are that exacting and that careful about the movement of alfalfa and the spread of (588) the weevil from the southern Idaho territory——

A. If they are not doing it now—yes; that is right. If they are not doing it now, it would indicate that they are letting up, not so strict, in the enforcement of the quarantine because the condition is not so serious.

This Willow Creek irrigation district to which I credit 27,600 acres on sheet 1 of my Exhibit 1—that isn't a project. That is the run-off of Willow Creek, according to the State engineer's report. That is just the land irrigated from the waters of Willow Creek, the watershed.

300 Q. You represent it here as lands irrigated. Now, don't you know, as a matter of fact, that the Willow Creek irrigation project was initiated to reclaim fifty thousand acres on Willow Creek north of Vale?

A. I am not talking about the Willow Creek project, Mr. Spencer, on this list here at all. I am talking about the (589) Willow Creek water-shed, according to the State engineer, the land that is now irrigated, and you will find that in the State engineer's report as being irrigable land in Malheur County.

Q. Now, that project was dissolved and taken into the Vale project, wasn't it, a part of it, and the waters of Willow Creek appropriated for that purpose?

A. I don't know about that. (590.)

On page 11 of the State engineer's report for 1924–26, you will find "Willow Creek, Malheur County, 27,602 acres." (591.)

As to what it was I expected from this 27,602 acres attributed to Willow Creek, I didn't expect anything, except the tonnage that I am now originating at present. This is irrigated land, and my tonnage figures from Malheur County at present show those are based upon actual production now. Now, whether it has any water or not doesn't

affect my tonnage figures. It is not reflected in the 64,000 tonnage that I gave as potential tonnage. Page 4 of the exhibit consists of the present tonnage. Page 13 consists of the present tonnage plus the tonnage which will be available from these various projects in the county within five years, plus the tonnage which will be available from these projects which are (600) now in the process of construction, ultimately, when they are completely settled.

Since these projects were initiated in there and built, some of them, the initial Vale project—the Willow Creek project and
301 the Warm Springs project, a railroad has been built in there to Crane, and then to Burns, and operated for the last 12 or 15 years.

Q. Do you know whether there has been any increase, year by year, of the production there under those conditions from that Oregon eastern branch?

A. There has been an increase on the Warm Springs; there has been an increase on the Jordan Valley; there has been an increase at Harper, a division of the old meadow lands there.

Q. Now; isn't it true, on the contrary, there has been a shrink on the Warm Springs? It is the worst irrigation failure we have got in the State.

A. Well, there wasn't any water in Warm Springs when your railroad was built in there. If it is producing any tonnage at all it certainly has been an increase.

Q. The Warm Springs, with an acreage of 31,300, only irrigates 13,000?

A. That is right. (601.)

Q. With only 69 residents on the whole project, it was bonded originally for a million five hundred and fifty thousand; that there are two hundred thousand dollars of its bonds in default, and a hundred and forty thousand bonds to the State for interest that it has advanced, in default, and the total interest debt to the State on its advance for that project, according to this engineer's report of 1924–26 to which you refer, amounts to $414,000.00 with interest on interest bonds in addition to that of $101,855.00, and unpaid warrants of $58,283.00—no, that is additional interest unpaid—and with warrants of $25,505.00—all that debt against 13,000 farmed acres—is that the condition of Warm Springs?

202 A. No, sir; not now. There has been, and just about is to be completed, an understanding between the bond holders and the directors of the Warm Springs irrigation project which will reduce the acreage to 17,000 acres, and which provides for the selling of part of the Warm Springs water to the Vale project, in order that the Vale project will have more water; and there is being brought about an adjustment of the situation which you have indicated there. And it appears that in place of 13,000 acres under the Warm Springs, reducing it to 17,000 gives it practically all good

land, and there is all that 4,000 yet to be brought under cultivation, which is the figure that I use here (602) additional land to be brought under cultivation.

And I treat that Warm Springs as a resource for the cross-State line to the extent of 4,000 additional acreage, on the strength that the bond holders and the State settlers up there are going to get together. The condition has been such that if they are going to get anything out of that project they are going to have to do what is right by the people out there. Now, fundamentally, that project isn't all wrong. If you know anything about the financing and construction of Oregon irrigation districts you know that the people have gotten for the expenditure of their money about 50 cents on the dollar. If they had gotten a dollar for every dollar that they put up in bonded indebtedness those districts wouldn't be in very bad condition. But they didn't get it; and now there is adjustment taking place in all those different projects, and ultimately they are going to be adjusted. (603.)

A great many of those bonds are held down in California. I don't know about southern California. I think the Bank of California holds a large amount of those bonds.

303 The Jordan Valley project is in Jordan Valley. It will be about 65 miles from a point on this railroad, over in Harney County, 65 or 70 miles from Venator on this cross-State line. It is just about due south from the Homedale branch. It joins on the Idaho line. It reaches the Murphy branch of the short line or the Homedale branch, either one of them, at a distance of about 65 miles. Now, that project, you will note I am producing commodities on it, and they are producing now largely livestock. They (604) are located such a distance from a railroad that they have to produce livestock. Now, livestock products largely are going to move west from that valley, and I figure on the tonnage that I note there on the low average of 250 pounds per acre of traffic produced, you can take a bunch of lambs out on any acre there and pasture it and you will get more tonnage than that. Now, it is reasonable that they will come out via Venator on everything that moves west.

As to whether that district, too, is in distressed condition financially, it isn't as bad as some of the other districts. It is being settled up fairly rapidly. Those people down there are getting along better than they are on some of the other districts. They have got, according to the report to which I refer, ten resident land owners on the project. They have a good many more residents out there now than this showing here. (605.) I haven't been down there in recent years, but I have talked with people who have been there. There will be a witness here from Malheur County who can tell you how many there are there.

According to this report they have got an actual bond issue
304 against their acreage of $400,000.00, they are in default to the

State for $72,000.00 and $120,000.00, and for $3,930.00, in State interest, with $1,595.00 warrants. If they can get that project settled and get it to producing they will improve this condition materially, and they are making real progress in the settlement of the Jordan Valley project. Every man who goes in there and takes settlement on one of these projects finds that the land he takes is burdened, not with any particular bonded indebtedness, but he is liable before he can get it released, the whole bonded debt has got to be paid and released. As to whether settlers are going in there on these projects when they are blanketed with debt like that, there was a movement in there last year. The people down there are very optimistic. I do know this, I know that (606) that enormous investment is not going to lie down there idle, it is going to be brought into production, and it is going to produce tonnage, because the bond holders can't afford not to have it do it.

The 8,960 acres shown on the exhibit is new land according to the Mead report, new land that will be brought under irrigation. That is not additional acreage for the Owyhee project. That project includes all of those pumping plants there, both in Idaho and in Oregon. I think it is some 46,000 acres altogether.

Q. If they were amply watered by the pumping plants, the production wouldn't be increased, but the cost was so great that it got to be prohibitive?

A. No; that isn't the condition. They weren't adequately watered by the pumping plants, because the water had to be lifted a hundred feet, and that is prohibitive.

Q. So the cost was the prohibitive part of it?

Westfall is in Malheur County, north of the present line that runs to Crane, between Vale and Crane. (607.)

305 There is no question but what there is a connection between the financial condition of these various irrigation projects and the absence of a cross-State line.

The Ochoco, in Crook County, at Prineville, is not the best one of all of them, but it is a very good project. It is at an elevation of about 3,400 or 3,500 feet, down to 3,000, 3,100. I don't know just exactly the elevation. The elevation at Burns is about 4,100, as I recall. The Ochoco project is off there on the Prineville City Railroad, off the main line about 25 or 30 miles, and only until this last year have they had a southern connection. I don't know whether it is about 18 miles from the main line where that branch line runs up there to Prineville. (608.) I have never been over that railroad. I have been over the highway a good many times from Redmond. From the junction up to Prineville there is a branch line connecting up there that is operated by a railroad that is operated by the Oregon-Washington Railroad & Navigation Company and the Oregon Trunk, the Northern lines, and the Union Pacific system.

Q. And the lines of railroad were in there before the project was built and developed?

A. They didn't have a southern outlet to California markets that is going to materially benefit that district, which they have now, just got this last year.

Q. Now, the southern Idaho projects didn't have a California market, according to your statement, either?

A. No.

Q. But they have prospered and succeeded served by only one railroad, and here is a district served by three, in effect, the Northern Pacific, the Great Northern, and the Oregon-Washington Railroad and Navigation Company, and it has failed perhaps worse than any of them except the Warm Springs, isn't that true? (609.)

306 A. Yes; that is true. The point I am making there is with the advantage of those railroads they had two lines in there connecting them with northwest markets and with eastern markets. Now they are getting a shorter route south, and that is where the bulk of the commodities which they grow are going to go.

The commodities they grow which will go south are sheep, cattle, hogs—they don't grow many hogs out there—butter and dressed poultry, potatoes, and go right through the Klamath Basin on their way. Probably the biggest commodity they produce as far as tonnage is concerned is potatoes. They go through the Klamath Basin and the Sacramento Valley and these other valleys long before they reach San Francisco.

Q. Now, they have an irrigable area there at the Ochoco of, in round figures, 22,000 acres—they have got 12,000 acres irrigated, and they have got 79 residents on that whole district, is that true?

A. That was the case when this report was written.

Q. And a bonded debt of $1,425,000.00, and bonds in default of thirteen thousand, interest on bonds in default eighty-four thousand, bond interest to the State on $1,425,000.00, total (610) State interest $406,000.00, interest on State bonds, interest bonds, of $95,541.00, unpaid debts to the district $48,947.00 and outstanding warrants of $59,960.00. Is that the condition reflected by this report?

A. That is the condition reflected by this report.

There is progress being made in adjusting that also with the State board.

Q. And with that condition obtaining at Ochoco, at the terminus of a branch line of railroad only 18 miles in length that connects with the service of three transcontinental railroad systems, you are advocating an irrigation district in the Fort Rock

307 district where the water supply is to come from drilling wells; is that right?

A. That is correct.

Exam. ROGERS. While we are showing the various financial conditions of these projects, is somebody going to show what brought those financial conditions about?

A. That's the point, Mr. Examiner. The fact is that they are things that didn't relate to railroads that brought that condition about.

Mr. SPENCER. The railroads——

A. Now, I say this: That those projects would have been somewhat (611) better off—and that is the question that the examiner asked me—would have been somewhat better off if they would have had an outlet to the southern markets, also the Malheur County would have been better off, the Warm Springs project would have been better off, had they had this cross-State line to carry their projects west, in place of carrying them clear around to Ogden and then down, or Portland and then down.

Q. (By Mr. SPENCER.) That is your speculation, that they would have been better off.

A. That isn't my speculation, for the reason that every shipper in that country would tell you the same thing.

Q. You say those shippers in southern Idaho are all prosperous except the wheat farmer, don't you?

A. No; I didn't make such a statement as that.

Q. Oh, you didn't?

Exam. ROGERS. What I had in mind, the mere recital of these various financial conditions, it seems to me, won't help a lot unless we show what brought about those conditions.

Mr. SPENCER. Well, it isn't claimed that the railroads brought it about. The point is——

308 Exam. ROGERS. Well, it isn't plain that the failure of the purpose for which the irrigation project was launched was responsible for the financial condition. I don't think that is to be presumed.

Mr. SPENCER. Well, I suppose if we investigated this as to (612) the responsibility it would take a long time. There has been a commission appointed, as provided by the 1927 session laws of Oregon, to try to analyze and solve this problem, but the point is that with this great blanket of debt over all these projects—and the worst ones haven't been even suggested——

A. What are they?

Mr. SPENCER. No settlers are going in there on these lands, and without settlers there certainly isn't tonnage for the existing railroads, let alone some more.

Exam. ROGERS. Well, if that were due to financial manipulation rather than the purpose of the project and the character of the land which it was intended to be irrigated, could we reasonably assume that that condition is going to exist for all time, and that there is nothing to the development of that country? You don't need to answer that, but that is just the thought that is in my mind.

Mr. SPENCER. Sure; I am willing to assume, for the purpose of discussing it, that it is a veritable scandal—I don't know anything about it—I am willing to take Mr. Teutsch's statement that—probably he is a little low, but I dare say that in the financing the actual settler didn't get over sixty-five or seventy cents on the dollar, if he got that——

A. He didn't. (613.)

309 Mr. SPENCER. But I think they all demonstrate that no project can succeed without the Government is back of it, that these examples are demonstrations of that fact, and their growth is a slow growth, and we are prepared to show that.

Exam. ROGERS. Well, of course, the mere statement of counsel to that effect won't have any bearing. We will have to have something more than that, if that is a fact and that is to be relied on.

Mr. SPENCER. Well, I just want to show the conditions of these projects as reported to the State engineer, in the fact of an estimate here by the witness that they are going to settle them and put a lot of tonnage on this road.

Exam. ROGERS. That is just the point I am making, Mr. Spencer—in my mind, one don't refute the other at all. I can see where Mr. Townsend can be right in that report—I can see where the commission can be also right.

Mr. MCCULLOCH. Well, Mr. Spencer, was it your idea in this line of examination to make the point that the unsatisfactory financial condition of these projects within the State was due to the demerits, the intrinsic demerits, of the projects themselves, that the land wasn't suitable for irrigation, or that the water supply wasn't there?

Mr. SPENCER. That is undoubtedly true of the Warm Springs, which the witness has put up, and the Willow Creek, and it is certainly true of Summer Lake and Silver Lake. I don't think (614) it is true of the Ochoco.

Comr. MCMANAMY. I think we will make better progress if Mr. Spencer will proceed with his cross examination and develop the facts.

310 I stated that the actual tonnage westbound on page 1 of exhibit 1 was 23,050 tons. I based that upon the annual turnover of sheep tonnage. The number of sheep in Malheur County, 50 per cent. There were probably a whole lot more sheep than that shipped out of Malheur County. The carriers' records will tell you that. I didn't have access to them. (615.) Exhibit No. 1 does not show that 184 cars of sheep were shipped westbound out of Malheur County. That is what we expect will be shipped if this road is constructed. It is tonnage that is in the county there now. It is my notion of the tonnage that exists there that can move off the cross-State line and represents only a very small percentage of the agricultural tonnage. For instance, the sheep movement there is only 25 per cent of the annual turn-over of sheep and the carriers' actual shipping records will probably show twice that many sheep moving out of Malheur County.

Turning to these irrigated lands of Harney County, first of Silvies River, I put that down as 87,566 acres that can be irrigated by the waters of the Silvies River.

Q. Do you know the duty of waters fixed by the Supreme Court of this State on Silvies River?

A. I don't know what that decision was. You will find that also on page 11, the State engineer's report, as authority for those acreages.

Q. Well, do you know that the Supreme Court fixed as the duty of water 3-acre feet for that district for the three years (616) ensuing from the entry of its decision in June, 1925, as reported in 115 Oregon at page 27, and extending through to page 137 on, and it found that some 62,000 or 63,000 acres was the maximum that could be irrigated; is that right?

311 A. You have the case there. I suppose it will tell whether it is right or not. The point there is, however, that during flood seasons, regardless of what the Supreme Court may decree, that that water has to go down and irrigate something, and it probably irrigates 87,000 acres. According to the State engineer it does.

Q. That is this same meadow irrigation that you were talking about, too, isn't it?

A. Yes; all Harney County irrigation is practically this same meadow land irrigation.

Q. Yes; and the Blitzen, you claim—the Blitzen is a private project, isn't it, or private enterprise? It isn't a project at all?

A. None of these are projects, Mr. Spencer.

Q. Well, the Silvies is——

A. They are all water sheds. In other words, they are the lands irrigated by the water sheds run-off of Silvies River.

The Harney Valley irrigation district has been organized. On page 39 of the report (617) of the State engineer, the insert table following page 38, the engineer lists as irrigable land 75,000 acres, and lands now irrigated in the manner I suggest of 61,000, but that does not include all the lands irrigated by the Silvies River. It just includes the lands that are now irrigated by that river in the boundaries of that project. I don't know the run-off of the Silvies River, according to Federal Engineer Newell, over a period of years. I take it, though, that the report of the Federal engineers on those projects took all those things into consideration when they made the reports, and I am basing my statements upon their report.

312 And the Federal engineer's report on that project was made in 1926 and 1927. I have not referred to that. (618.)

Referring to Exhibit No. 13, the irrigation map, I believe that the Middle Fork of the Malheur comes in at Drewsey. The lands that I refer to as available for irrigation are north of Drewsey. Those lands are not available for irrigation; they are now irrigated. They are little shoestring valleys and whatever there is in the way of production there comes down to the existing railroad at Riverside. Any alteration would not affect my tonnage figures either the present tonnage or that to be available.

Q. And Silver Creek—Silver Creek is some 25 (619) miles north of—that is, the district location, 25 miles north of the cross-State line, is it not, and north of the Double-O ranch?

A. Well, the reservoir. It strings along Silver Lake. The lower end of it would be down fairly close to the Double-O ranch. It is going to control water on that empty land down there, supposed to do that. (620.)

Q. Well, that is a flat from the lower end of that reservoir down to the Double-O ranch—the district would be all north of that commencing at a point probably 20 miles parallel with and north of the cross-State line, and goes along back up to the slope, does it not?

A. I think probably——

Q. Have you been through there?

A. Yes; I have been through there. I think probably you are a little far; that is, the lower end of the project would be closer to the proposed railroad than that.

Q. In any event, in this report of the State engineer—please refer to that again, that insert at page 38—that is the Silver Lake irrigation district. What is the irrigable area of that district, according to that report.

313 A. Silver Creek Valley irrigation district is 16,300 acres. I do not have it listed on page 5 as 23,669. I am talking about the waters of Silver Creek and you are (621) talking about the Silver Creek irrigation district, and they are two separate things. The 23,669 acres shown on page 5 is the total irrigable area as reported by the Oregon State engineer as being irrigated from the waters of Silver Creek. In my exhibit on page 5 I am not talking about the project at all; I treat that later. The significance of my figures of 23,669 acres is this: I just want to show what the engineer reports as now being watered by the natural run-off in Harney County. That shows a total of 218,603 acres, and it is that acreage (622) that supports the whole agricultural industry of Harney County and provides for the origination of all the present tonnage that I have estimated here.

Q. Well, there is no such acreage as that [23,669], watered or dry or anything else, in that watershed, is there?

A. The State engineer says that there is, and I think there is—that Silver Lake runs on down into the Double-O ranch, and irrigates that whole country down there. You know that, don't you?

Q. No, nor you don't, either. (623.)

Page 5 shows the present shipments of Harney County westbound as 650 cars. I arrive at that in this manner. There are 185,730 sheep in Harney County from which there is an annual turnover of 50 per cent or 92,865, which are marketed annually; while all of the lambs now move east, approximately 25 per cent would move to California as fat lambs via the proposed line. As to whether I have any actual shipments there at all, I don't know as that is a mere estimate. That is based on the actual number of sheep in

314 Malheur County, and we know that for the Northwest the turnover is 50 per cent and that is low, but there could not be any less than that and there could be a whole lot more. Now these

are the shipments westbound, my estimate, representing 25 per cent of the lamp crop in Harney County.

Q. Yes; now, you could obtain, of course, the actual shipments as they move. You don't contemplate any substantial increase, do you, of livestock in there? (624.)

A. No; the only figures in livestock will be as the result of bringing under production these new lands, which we figure. There might be some increase in cattle. Harney County now—this cattle population is about 50 per cent of what it once was, and there could be a substantial increase in the number of cattle, and the cattle would all move west.

My estimate of the total movement of cattle, sheep, hogs, wheat, and horses westbound of 650 would not be somewhat large. I said 25 per cent of the sheep, all of the cattle, hogs, wheat, and horses would go west. I think I know how much of the wheat went west last year—67 cars of wheat were shipped from Burns last year. As far as wheat for export is concerned, last year (625) was the first time they planted any considerable acreage in wheat and the shipments show it from Burns. The railroad was completed into Burns in 1924—that may be correct. When I say that wheat is for export I do not mean for export from there locally; I mean export as milling wheat to leave the country. I say that Willamette Valley wheat is exported because it is an export wheat and this is soft wheat over there in southern Idaho and is going to be used locally in western Oregon; that is substantially my statement. (626.) It is a fact that the western Oregon wheat is soft wheat—the same
315 character of soft wheat as the southern Idaho wheat. And the southern Idaho wheat goes to the Southwest and is consumed there. There is a substantial difference however in the price that the southern Idaho and Harney County farmers get for the wheat and the Willamette Valley farmers get for their wheat. Irrigated wheat is quite often more foul with weeds and takes a lower grade and is of lesser value even for milling purposes. When it is used for milling purposes it goes as export flour. As to whether a practically large percentage of it at least is consumed by the mills in southern Idaho and at Ogden, I don't know about that. I know that a good many of the dealers in Ontario and Vale ship to Portland. I take it that all the wheat in Harney County would move west, every pound of it.

Q. Now, you cite as producing tonnage for the cross-State line the counties of Klamath, Deschutes, Crook, Jefferson, and Wheeler. How is that business going to get to the (627) cross-State line from either Klamath County on the south, that is served by other railroads, or from Deschutes, Crook, Jefferson, and Wheeler, which is on the north and served by other railroads? Page 13?

A. Well, we will take Deschutes, Crook, Jefferson, and Wheeler Counties, which are treated as a block, and how that is going to get there. The tonnage which I have estimated as originating in those

counties is the following—there are 149,955 sheep in those four counties—an annual turn-over of 50 per cent; that is, 74,977 sheep are marketed annually. Seventy per cent of these go as feeders to the feed lots of the Northwest, in Idaho, and on to the mid-west. I figure that that tonnage originating at Prineville, Madras, and the Wheeler County stuff is driven and now marketed at Prineville, to come out that way, it would be the shortest route for
316 them east over smoother country, through the feed yards to which they now go. On that basis I made these estimates.

Q. You have taken this business away from existing railroads that don't pay their operating expenses, in that Deschutes Canyon. Is that right?

A. I don't know about the actual figures.

Q. Well, you are not considering the existing railroads as necessities at all in your estimates. Is that right?

A. Well, I should think that livestock movements will take the—certainly, as a shipper I would take them over the (628) smoothest line, instead of bumping them down the Deschutes, down hill, and then across along the Columbia River and up over the Blue Mountains and down hill again into the feed territory; I would take them along the smoothest route if I were a shipper, and I think that is what other shippers would do.

As to whether there is any preference in the Malheur Canyon as compared with the Deschutes, I think there is quite a difference. I don't think it is in favor of Deschutes. I have ridden over both of them. As to whether it is a good deal better railroad into Bend than to Burns, it may be better; but I notice I got a lot of bumps going up there or coming down either one. I have been over the other one with a livestock train and passenger train and say that the Malheur Canyon is a little the smoothest. As to whether there is any comparison as a matter of maintenance and quality of road, as far as railroad construction is concerned, as far as rails and ties, I think the Bend line is a better road. (629.)

As to how I anticipated the Jefferson County traffic, it would move over the cross-State line. Most of that stuff is loaded up there at Madras, comes off the range—you see, sheep would come off
317 the ranges there—and goes as feeder lambs, and moves to the feed lots of the Northwest. These are largely in Idaho. They are cross-bred lambs. The ewe end of them is taken out for replacing flocks in Idaho and they take the others out and ship them to California.

Q. The line that takes them out brings them back as feeders, don't they, as a rule?

A. The line that what——

Q. Feeders get a low rate to the feeding areas, do they not?

A. I suppose they do.

Q. And the line that takes them out brings them back as a rule?

A. Well, they go on east, the large percentage of them, or south to California.

Q. Oh, feeding in transit?

A. They don't come back.

Q. Well, some of them do?

A. Very few of them. A few lambs move from the southern Idaho country into Portland, but Portland is a very small market, and that is a very limited quantity. (630.)

The southern border of Wheeler County runs up into the Blue Mountains and there is where the sheep graze. When they take those lambs out of there, they load them at Prineville.

As to whether I think they will bring them down to the existing roads of Prineville and deliver them to the cross-State line to haul out to Ontario, instead of moving by the railroads that receive them, the stockmen would designate that route that they should take if that road were built, I believe. They would move to south Idaho. Get these projects in Malheur County and that will be as great a feeding area as we have in the entire West.

318 Mr. SPENCER. The tonnage you have in Grant County, on page 14, is taken away from the Sumpter Valley and brought down to the cross-State line. Is that it? (631.)

A. It wouldn't take very much tonnage from the Sumpter Valley; not very much tonnage moves out on the Sumpter Valley right now.

Q. It is impoverished railroad but it serves that country, doesn't it?

A. It was built in there to get the timber. It was built by the operators to get the timber back to Baker. That is what it was built in there for. It is a road that you have to switch back in over the mountains, up over a circuitous route and turn circles. Not very much of the livestock is shipped out over that road. It is moved from Austin. The stuff from Grant County comes out from Pilot Rock and Heppner and Prineville, and Seneca since the Herrick line was built.

Q. Well, notwithstanding your aspersions of the Sumpter Valley road, it has been a factor serving in the development of that country in the last thirty years, and before you were ever in the county promotion business, wasn't it?

A. I don't know; the first time I ever went up to Prairie City, about 20 years ago, it was in there then. I don't know how much before that it was there.

Q. And you think it is of no importance whether it is stripped of its business or not?

A. Well, it isn't getting the business now. How are we going to strip it of any business? It is there, and we are not using (632) it. How are we going to take any away from it.

Q. It is operated every day, isn't it?

A. Yes; it hauls lumber, very few livestock, and I am shipping livestock. It is only a small portion that is produced in Grant County.

319 The Sumpter Valley Railroad just comes down out of the Blue Mountains. The John Day Valley ranges have a large number of livestock in Grant County or south of this line, and are tributary to Seneca, which is the end of the Herrick logging road extending from Burns up into the Bear Valley, and I am estimating that there is going to be an increased movement of (633) livestock from Seneca because it is a shorter route. You don't have to go over a narrow gauge—you can load onto broad-gauge rails, and it will carry you out to California markets and it will carry you west, and that is the way stuff will move. In mentioning that you could load on broad-gauge rails from Seneca I had in mind that the Sumpter Valley is a narrow-gauge road and you would have to unload at Baker, and you can load at Seneca and carry it right through. Seneca Valley is a common carrier, but I don't know whether its securities have been issued by authority of the Interstate Commerce Commission; but I presume that is true. As to whether I know that it requires all the business that it can get from that rugged country, which it penetrates to sustain it, I don't know that that is the case. I know that the (634) Interstate Commerce Commission granted permission to the Herrick Lumber Company to build a road up to Seneca and use it as a common carrier. I presume they want the traffic to go out that way. I know it is a service to the stockmen that it should go that way. (635.)

All of the sheep that move from the Seneca country have gone east. Now, of course, that is where it has to go. There is no other market for it to go any other place. The cattle went east too; they went to Nebraska, the bulk of them last year—on the feed lot there. This year, however, they may move to Seattle, and they have moved west previously (637); that is, the stuff that is grazed up in

320 Bear Valley by Southwick brothers, by Oliver brothers, and several others; a lot of it goes west. In fact, Southwick shipped his steers to Portland last year. They either load at Seneca or drive to Burns. They have the railroad in there now and they are going to load at Seneca.

Q. Now, if they ship to Baker, and the Sumpter Valley, where it is brought west, a westbound movement, to avoid a substantial distance in mileage, don't they?

A. No; they don't avoid anything. They are right on their grass in Bear Valley now, that livestock, and if they go to Prairie City they have to tail about 40 or 50 miles and they get a shrinkage, and then they have to load on a narrow gauge railroad and go up over a mountain. In fact, they don't move any stuff out that way.

Mr. McCulloch. You mean by the Sumpter Valley?

A. Yes; by the Sumpter Valley. Seneca is right in the grass producing area, and that is where the livestock are in the summer time.

Q. (By Mr. SPENCER.) That country has been shipping out by the (638) Sumpter Valley and Baker for years, hasn't it?

A. From Austin quite a little stuff moves. I don't think that practically any livestock moves from Prairie City. They move off the ranges of the Blue Mountains up there at Austin, which is up on the summit——

Q. Before they had the Herrick road in there where did they go?

A. The stuff I am talking about that was being shipped from Seneca was trailed down to Burns, when they got the line to Burns; before that, to Crane.

Q. As a matter of fact, if they go out to Baker, they escape one extra feed, and they save some two hundred miles in distance, don't they, if they are going to the coast?

A. Well, those other conditions, though, offset that.

321 Q. Oh, they do?

A. Oh, if they don't, they would be using that line, and they are not using it.

I classify as potential for the cross-State line the development that is going to result from the Summer Lake irrigation district. That is on page 10, and I classify there as available 5,000 acres. I am familiar with the history of that district. (639) The dam has not gone out. The conduit broke and washed out a section at the bottom of it, and they built a stillway for it. They did not build an entirely new dam there for it. They just repaired a portion that washed out. (640). I have been right in there and looked at it. One end of that dam did go down and break out, but that did not require construction of a new dam. It required the repair of the old dam.

According to the table at the bottom of page 38 of the report of the State engineer, 4,941 acres is the total area in the project and they are now irrigating 708 acres according to the report, and I think that is about right. The number of land owners is 24 and the number of residents is 9. The situations in the Summer Lake project and the Silver Lake project are identical with those on the Ochoco. There are plans being made now from which ultimately the bond holders will get (641) together as to what land will stand which will permit settlement.

Q. Now, the settled and cultivated irrigated lands in that project are burdened with a debt of $415,000.00, are they not, according to this very table that is before you, a debt of $572.00 for every acre that is now irrigated and cultivated, and you put that in there as a potential resource for the cross-State line?

A. Yes, sir; and I believe——

Q. And how many miles is it south of the cross-State line?

322 A. It is probably about 25 miles.

Q. Isn't it about 40 miles?

A. Well, directly south—you go directly north from Summer Lake and you won't be very far away from the cross-State line. The Summer Lake project is at the north end of Summer Lake, and that

is 50 miles from the railroad at Lakeview. It either has to go to Lakeview or it has to go to the cross-State.

I know Mr. W. L. Powers of the State Agricultural College. He is head of the soils department. (642)

Dr. Stevenson is an assistant of the soils department of the Oregon Agricultural College.

I know something about the alkaline condition about Summer Lake. I have probably been over that project more than Dr. Powers has. It is not at all probable in my opinion that any settlers will go on the Summer Lake project until there is an adjustment of the bond holders. But that is being brought about. They are considering the matter. In fact, a State engineer announced not long ago that they expected to get to a definite conclusion before long. As to whether I think that with a railroad 25 or 30 miles away it would be helpful to that project, it certainly would be more helpful than one 50 miles away, and tonnage which I have estimated from that project was based upon things which can be readily moved.

Q. Then you go down here and you carve out 46,000 acres out of the Fort Rock and the Christmas Lake Valleys as an irrigation project. That project has been dissolved, hasn't it?

A. I don't carve that out as an irrigation district. I carve (646) it out as a possible development on the basis of individual pumping units.

Q. How did you happen to arrive at 46,000 acres?

A. Because that is the reasonable amount of good land in that valley, to my personal knowledge, which will be—or permit medium lifts.

323 Q. The only cultivation they have in there now is 50 or 60 acres on a well that was drilled by the State at the State's expense some five years ago. Isn't that true?

A. The well was drilled by the State, and then it was appraised and then was sold to Mr. Ernst, upon whose place it is, for $430.00.

I don't know how much it cost the State. I know that they appropriated, including the geological survey and everything connected with it, and they put down four wells. This was not the only well except a well on the Cranston place that produces water at all. They all produced water and they all tested out.

Q. How does it happen that they haven't produced any crop over there except on this Ernst place? (647.)

A. Well, they have been doing it under difficulty. When you are 60 miles from railroad, and no means of transportation to get products out, it is difficult to get capital to develop anything.

Q. Well, if they have plenty of livestock feed they do it, you say, down in the Jordan Valley. Is that right?

A. That is right, from a gravity project. They can't do it on a pumping basis 60 miles from a railroad.

Q. As a matter of fact, the east end of that valley is all hardpan, isn't it?

A. The east end of the valley?

Q. Christmas Valley?

A. What do you mean by hardpan? All of eastern Oregon is underlaid by hardpan at various depths.

Q. The hardpan is on the surface, except where there are sand ridges and sand dunes are piled up. Isn't that true?

A. Some sections of it, but there are 46,000 acres and more
324 than that of good land there that is susceptible to water, out of two hundred and some thirty thousand acres.

Q. If it is only 20 or 30 miles from an existing railroad, why isn't it settled?

A. Twenty or 30 miles?

Q. Why, certainly, from Fort Rock to the Great Northern (648) Railroad, and from Fort Rock to the Southern Pacific Railroad.

A. It is more than that. And that is at the west end of the Fort Rock Valley, and Christmas Lake Valley extends a long ways east from there. The town of Fort Rock is at the extreme west end of the Fort Rock Valley, quite a good ways from Fremont, and Fremont is right at the edge of the timber.

Q. But it isn't any thirty miles from the Great Northern Railroad to the head of that district, is it?

A. It is farther than that, I would say.

Q. Well, you look at the map by your townships there and you will find out that it isn't.

A. Let's see where there is a map that shows—it will be about 30 miles from Fort Rock, I would say, to the Great Northern.

It is 46 miles from Fort Rock to Crescent, which is almost due west from Fort Rock. (649.) It is between 25 and 30 miles to the Great Northern Railroad (650), but it is closer than Summer Lake right now. The project at Summer Lake is already built; the dam has been put in. So has the Silver Lake Dam been put in. I understand in the Fort Rock Valley there is an additional 200 acres been seeded to alfalfa, and there will be a pump on it this year. (651.)

Mr. McCULLOCK. Mr. Spencer, I wish to say, before you commence, that I have read the letter that you received from Dr. Powers, of the Oregon Agricultural College, and I have no objection to
325 your cross-examining the witness and offering it in evidence in connection with his cross-examination, if you desire.

Comr. McMANAMY. If it is very short it can be read into the record.

Mr. SPENCER (reading). "Oregon State Agricultural College, school of agriculture and experiment station.

"Corvallis, July 31, 1928.

"Mr. Robert E. Shinn, U. S. National Bank, Salem, Oregon.

"Dear Sir: I think there will be but little land culled out of the Silver Lake project, either on account of alkali or porous texture. Summer Lake project has been classified by Dr. Stephenson, and perhaps one quarter of that project will be too alkaline for economic use other than pasture. The project contains perhaps 4,000 acres.

"Yours very truly, R. L. Powers, chief in soils." (653.)

The WITNESS. You notice the point in the letter is that one-fourth of the area is two alkaline to be used for economic purposes other than for pasture. You (654) know that in that territory sweet clover grows; that that land does produce good and abundant pasture, even though it is too alkaline for the production of other crops. The tonnage derived from that pasture land under water would not change my figures here at all.

Q. (By Mr. SPENCER.) Well, the presence of alkali there has kept the settlers off of it and will continue to until they get water, will it not?

326 A. That will keep them off until that is adjusted.

Q. Now here is Douglas and Lane County, and Linn County, Benton County, Lincoln, and down in Coos and Curry, Josephine and Jackson. Now the tonnage you estimate for the cross-State line from those counties, in your opinion is it as assured to the cross-State line as the tonnage that you estimate from the southern Idaho and eastern Oregon counties?

A. I think the bulk of it will naturally take the shortest route east, and feeds will move from eastern Oregon to western Oregon; that it is conservative.

Q. Well, I am talking about the western Oregon counties now. And your estimate of tonnage available for movement from them over the proposed cross-State line. Now do you think that it is as probable that this tonnage will move via the cross-State line as it is probable that the tonnage you have estimated from the eastern Oregon counties will move over the (655) cross-State line?

A. I think practically so, to the extent that these fruits and perishable commodities will follow the shortest route—that is the basis upon which I make these estimates—to the consuming markets.

Q. (By Mr. DEY.) In what, Mr. Teutsch, did you find the basis for the estimates of the tonnage that you allocate here to the cross-State line if it is built from Western Oregon counties? To take a specific case, you estimate from Lane County three cars of clover seed; now how did you arrive at three cars?

A. There are 5,500 acres of clover which has produced on an average three carloads of clover seed for export out of Lane County, which moves east via rail. That is, that don't represent the total acreage or the total shipments out of Lane County; it does

327 represent the amount that dealers told me moved on an average to eastern markets via rail.

Q. Well, you had nothing more definite then as to past movements to the East than what the dealers told you moved?

A. Actually shipped—what shippers who handled these seed told me.

I did not go to the railroads or get any of that information from data furnished by railroads. (656.) I did make inquiry as to how much seed moves to Portland and then east by water. The larger

portion of it moves that way. But I excluded all of that from my estimates.

Time is but essential with respect to the movement of some classes of seed. Now dealers told me this in the Willamette Valley: That clover seed, which is a commodity of high value will move in larger proportion by rail because of the amount of money tied up in a car, and they want to get that money released as quickly as they can, rather than by water. So that clover seed, because of its value has a tendency to move more by rail that rye grass seed, for instance, which is only worth 4 to 4½ cents a pound as compared to 25 or 30 cents for clover seed.

Q. Then how would you explain these figures: The Southern Pacific handled out of Lane, Linn, and Benton Counties, which are three of the counties you cite here, 51 cars of clover seed, of which only 10 went east by rail and the bulk of the (657) remainder came to Portland and must have moved out by water? You would not say that clover seed is not moved by water, would you?

A. No; I didn't say that. I said there was tendency to move clover seed by rail more than there was a tendency to move rye grass seed by rail. I think those figures are about consistent with my estimates

328 I have estimated here from three counties, Lane, Linn, and Benton, 10 cars of clover seed moved east over the cross-State line including in Benton County two cars of clover and vetch. I am giving to the cross-State line all of the clover seed that has hitherto moved east by rail if your records show that. I don't know how many you move, what your records show, but I know from what dealers tell me that approximately 10 cars from those counties move east. (658.)

As to why it is reasonable to suppose that this traffic which originates on the Southern Pacific lines in western Oregon is going to be routed, in so far as the eastern (659) movement is concerned, over the Alturas route, it having been routed in the past through Roseville, Calif., I don't know about that. Your Alturas line is not yet built. I based these figures upon the present routes. My estimates were based upon them. Your Alturas line will be about 200 miles further. On a commodity such as clover seed I don't suppose that shippers would pay particular attention to routing, because it is nonperishable.

Q. And to that extent, then, at least, your estimates may be incorrect here as to the volume of traffic?

A. That all depends upon the completion of the Alturas line.

Q. Yes. It is reasonable to expect, is it not, that if the Southern Pacific Company in the past has enjoyed this business over its Roseville route, which is 400 odd miles longer than the proposed cross-State line, that it will be able to retain to its rails a substantial percentage, if not all, when it has the Alturas route, which is only 215 miles longer than the proposed cross-State line? Isn't that a reasonable expectation?

329 A. I think that is likely. I think the point there will be determined by the division of rates over local, the revenue which the Southern Pacific will derive from a car which originates in the Willamette Valley and moves east via one route as compared to the other. On clover seed, this commodity of clover (660) seed, which makes up a very small tonnage and is a concentrated product moves in very small volume.

Q. I know. I am only taking that because it is the first item on your list.

A. Yes; take perishable commodities—take perishable commodity like broccoli, or cherries, or something of that kind——

Q. Yes; we will come to that. Now then, during the time this clover seed has been moving through the Roseville route, take the county of Linn, which has eight of the nine carloads that move east, there was a route opened through Portland, only 45 miles longer than your proposed cross-State line on products from Linn County, and if that traffic has moved through Roseville in the past, do you think there is a chance of it moving over the cross-State line within the Alturas line completed, so far as it originates on Southern Pacific lines, which it does? Is there a reasonable chance of your getting any of those 10 cars, as you call them, or nine cars, as our figures show, for your cross-State line, in view of the past history of a route through Portland, only 45 miles longer than your cross-State line?

A. Forty-five miles longer? It is more than that from Lane County; it is 90 miles from Lane County.

Q. I am talking about Linn County. That is where the bulk of it originates. (661.)

330 A. Linn County?

Q. You understand what I mean. In the past the Portland gateway has been open for that traffic.

A. Yes.

Q. Yet it has moved 400 odd miles longer than the cross-State line, through Roseville, when this gateway was open through Portland, only 45 miles longer than your cross-State line. What chance under those circumstances, in the light of the past history, has the cross-State line got of getting a single one of the ten cars which you allocate to it? Now as a reasonably fair proposition, what chance has it got?

A. Well, I will say that the bulk of it has moved by Roseville. You are shortening that route 200 miles. It is not likely that a large percentage of the clover seed would move that way, unless the Southern Pacific found more profit in moving it over another route.

Q. Well, it is evident, isn't it, that the Southern Pacific has not found any profit in moving it through the Portland gateway during the many years of the past? That is evident, isn't it, because it has not moved that way?

A. They have a longer haul this other way.

Q. Will you answer that "yes" or "no" for the record because the shake of your head does not get in the record.

A. The question was that it has——

Q. It is certain, isn't it, that in the past the Southern Pacific Company has not found it profitable to take a local (662) haul on that down to Portland and route it through the Portland gateway over foreign lines?

A. That is true, if your figures are correct. I am taking your own figures as a basis for my answer to that question.

Q. Yes. Now if that is true with clover seed, a large part of
331 which comes down here to Portland, the largest part of it, and moves out by water, it is also true of any other commodity that you have named here and that does not require very expedited service? The principle of the proposition is the same, isn't it, if the commodity is one that does not require rapid service?

A. That is true. That is very true. There is the point of service that enters into that question, however, Mr. Dey. That is, cannery men and every one else are interested in getting shipments which originate by them in Oregon to their purchasers in the least possible time, and I assume that on the basis of good business they are going to take the shortest route that will give their customers the best service, and I base these figures on that.

Q. That feeling is not any more peculiar to cannery man, is it, than to clover seed producers?

A. It is somewhat different, because the value of the commodity has something to do with it—the time that it comes into consumption. Clover seed is a commodity that is used at a certain time in the spring time in the East; it needs to be there on (663) that time. I think it will be determined somewhat as to the time it was ordered and shipped in the Willamette Valley, as to which route it would take.

Q. Clover seed is a pretty valuable commodity, isn't it?

A. Yes.

Q. Now, you mentioned broccoli a moment ago, and your figures show that there is a potential tonnage in that commodity for the cross-State line of 4,190 tons, 419 cars.

A. Yes.

Q. Where did you get that data? What was the basis or source of the information upon which you compiled that data, rather?

A. The average annual shipments of broccoli during the
332 past four years from Douglas County have been 419 carloads, all of which go east. The broccoli shippers now say that their produce arrives at eastern markets from 24 to 48 hours after similar produce started from California at the same time. There has been as high as 937 carloads, I believe, of broccoli shipped out of Douglas County already. That is what has taken place in the past. I am assuming that if this cross-State line is built that they will at least produce as much as they have one year under present transportation

facilities. That is where I got that figure. It will be still less—the figure that I use will still be less than the total which they have actually shipped in the past—about the same.

Q. Where did you get this average of 400 and some odd cars the last four years. (664.)

A. I got that from the Bureau of Agricultural Economics, carlot shipments of vegetables, and that is assembled at the Spokane office.

Q. That covers what years, '25, '6, '7, and '8, or '24, '5, '6, and '7?

A. I believe that was the past four years, including '27. I believe that is right; I am not sure about that, Mr. Dey.

But I could determine that. The Southern Pacific Company is the only railroad serving Douglas County. I was told by the largest shipper of broccoli that most of it moved via Portland.

Q. I was just curious to know the source of your figures, because, according to our figures, the average was considerably less; 340 cars, perhaps, around in there. Now, in 1925, Mr. Teutsch, our figures show that 53 cars moved out, and in the following year of 1926 875 cars moved. These are cars (665) of broccoli moving out of Douglas County. Can you tell me the reason for that wide variation?

333 A. Yes, sir.

Q. What is it?

A. You recall that the winter of 1924 was a very severe winter throughout Oregon. Wheat froze out in eastern Oregon and the Willamette Valley and it happened to kill some of the broccoli in Douglas County. I think all of the shipments that originated there originated at Riddle, south of Roseburg, which is not usually the heaviest shipping point, that year. I think there were only a car or two moved out of Roseburg that year, and the reason for it was frost.

Q. Well, there were only 53 cars altogether, according to our figures.

A. Yes, I think that is right.

Q. So that your broccoli is not a dependable crop?

A. It has been grown there, Mr. Dey, since 1915, in substantial cars. The first shipments were in 1915, and they reached a peak there in — when was it? What was the year that they shipped 937 cars, or approximately that?

Q. There was no such year, according to my figures. There were 875 cars in 1926.

A. That was the peak year.

Q. That is eastern, of course. Eastern shipment only is what I am talking about here, because we are dealing with a new (666) proposed line to the East.

A. My figures are for, of course, the total cars originating according to the Bureau of Agricultural Economics. And local dealers told me that practically all of that went east, which is the case there. It is only a few cars difference.

334 Q. Well, a difference of nearly 100 cars a year. But where there has been in the past a variation, or a jump from 53 cars to 875, you say that that shows a dependable crop situation?

A. It does not now largely on account of transportation facilities, because they can't reach markets in competition with California production.

This broccoli has been produced in the Umpqua Valley, Douglas County. There is practically none of it growing north of Roseburg. They grow a small acreage. It originates largely at Roseburg—at the stations just south of Roseburg, Dillard, Riddle, and Myrtle Creek. I think the shipper routed it via Portland. As to whether the raising of broccoli is rather a hazardous (667) business, there has been only one failure there and that was due to frost.

Q. Now in 1927 our figures show 258 cars moving east, a drop of over 600 cars from 1926. In 1927 it was over 800 cars more than the year before.

A. There was an enormous increase in acreage during those same years in California. If you had your figures for California you would find an enormous increase between those same years in shipments of broccoli in California. Now, the point is that Douglas County producers have varied their acreage considerably because of the difficulties they have come in contact with. If they could get the same service, or practically the same service that the California shippers and producers can, it would have a tendency to stabilize your acreage. And one thing that would enter into the broad fluctuation there would be the influence somewhat of price, and would be the influence of climatic conditions.

Comr. McManamy. Do you know whether or not in 1927 it
335 was all shipped out of there? Was the broccoli shipped out?

A. I don't believe it all was. I am pretty sure it was not all shipped out. And I know that in 1926 when they shipped their peak crop there was quite a little of it not shipped.

Broccoli is highly perishable and requires icing. (668.)

Q. Now then, figuring the icing facilities at Portland, and which are available to all of the railroads here, and the icing stations along the main line of the O.-W. R. & N. and Oregon Short Line, do you imagine that the same service would be available on this proposed cross-State line that has been built up by very huge investment on the present route through Portland?

A. This occurs to me in connection with that: That at the time Douglas County broccoli moves, which is late February, through March and into April, this cross-State line traverses a territory that is still cool; in fact, it is cold; it will be freezing every night up there in the Cascade Mountains; and they can probably get through them, at least the growers think so, with initial ice, or with less ice than they are now using, over the cross-State line.

Q. Well, it is not very warm up the Columbia River Gorge, is it, and over the——

A. A whole lot warmer; yes.

Q. The O.-W. R. & N. or the Short Line, during those months?

A. It is a whole lot warmer.

Q. And still they use ice, do they not?

A. Yes. (669.)

Q. (By Mr. DEY.) Now take other perishable products, Mr. Teutsch, that don't come in the same season that broccoli does but that come in the heat of the summer and that you expect to move
336 over the cross-State line, how about the weather conditions then with respect to the amount of ice required as compared with the present Union Pacific route?

A. From Douglas County, prunes, pears, apples, would all move during the fall months, when temperatures ought to vary in favor of the cross-State line, because you are traversing a country of higher elevation.

The hot season over the high desert is in August. It gets fairly hot there then. It is not as hot as it is in the Columbia Basin counties in lower elevations, however, and it is not as hot as it is in the Snake River, for instance, or along the Columbia.

I have allocated to the cross-State line all of the broccoli movement.

Q. Now let's take up the item of hay, Mr. Teutsch, Lane County. You have there 40 cars available over (670) the proposed cross-State line and an additional four cars five years hence, 44 cars. The Southern Pacific records show in a period of almost two years, from September 1, 1926, to June 31st, 1928, 51 cars of hay brought in, of alfalfa hay, and that is the kind of hay I understand you expect to bring across?

A. Yes, sir.

Q. Do you think it is reasonable to expect that these other hay-producing districts which have sent in the 51 cars during the period that I stated there will no longer bring in any hay in competition with the weevil-infested area from which your hay is to come?

A. I think that the price at which that hay can be produced, plus the freight rate, to the point it is to be used, will determine from where it originates, and the difference between those other
337 points you are talking about as alfalfa hay producing districts is the difference between a 3-ton yield and a 5-ton yield.

Q. What I am trying to get at is this, and you can answer it very easily, as to whether or not it is reasonable to expect that the Klamath Basin that raises, according to your own figures, some 75,000 tons of alfalfa now, and has more land coming in——

A. No; not alfalfa.

Q. That is all kinds of hay?

A. That is all kinds—all tame hay. (671.)

Q. How much alfalfa? Most of it is alfalfa, isn't it, down there?

A. No; a large proportion of it is wild hay; some tame hay.

Q. Well, this wild hay is not suitable for importation?

A. Not suitable for importation. It is never shipped; it is fed to stock or cattle.

Q. Whatever alfalfa they do raise, do you expect the Klamath Basin and the irrigation districts of eastern Oregon, that are fairly accessible by rail to-day, and the Yakima Valley in Washington, which has been a large producer and shipper of hay into this territory, are going out of the western Oregon market when the cross-State line is completed? Is that a reasonable presumption, a reasonable assumption? Do you think that they are going out of the market?

A. I think they will be forced out of the market, because it won't be possible for them to meet the prices at which it can be supplied from Malheur County, and that is going to determine whether they are going to be in the market or not.

Q. Then in your judgment Malheur County is going to have a preemption on western Oregon for alfalfa hay, absolutely exclusive of the field?

338 A. They are going to have a larger surplus than any section in Oregon. Deschutes County now practically feeds up every pound of alfalfa it produces. You talk about Klamath becoming a great competing district; they are feeding practically (672) all of their alfalfa. And the price of hay in Klamath Falls and Deschutes and Crook Counties is higher than it is in Malheur County.

Q. And when you make that statement you do it with the knowledge of course that the Malheur alfalfa hay has been infested with this weevil for years and they have not been able to ship it out, and of course it has no appreciable value; that is true, isn't it?

A. Well, they are shipping some of it out of the infested area by grinding it into alfalfa meal. That might be done. They are moving how much? I don't know—forty carloads? Do you remember the last case, Mr. Dey?

Q. I remember the last case; yes.

A. Evidence was submitted here that 440,000 tons of hay were going to move into western Oregon, and you are cross-examining worse on this little forty cars than you cross-examined on this 440,000 tons.

Q. Why, yes; the exaggeration of course is just a matter of degree, and we are free to cross examine you on it. Now when, if ever, they get the weevil out of the Malheur hay, it is going to go up in price, isn't it?

A. I doubt that very much. I have lived practically all my life in Malheur County, and I know it has consistently been the lowest priced country for hay in the Northwest because of the enormous

production. With the 100,000 acres of additional (673) land coming under irrigation it is going to have one of the largest supplies of alfalfa that any country here in the West has.

339 Q. All right. They have to cultivate the soil over there the same as they do in any other district, don't they?

A. Yes, sir.

Q. And their seed costs them just as much, and their labor costs them just as much; that is true, is it not?

A. Yes.

Q. Now what factor is it that is going to enable them to revolutionize this alfalfa hay to western Oregon?

A. It is the yield per acre very largely. I have actually harvested ten tons of hay per acre in Malheur County, under irrigation, measured field.

Q. Is there no other place in Oregon at which that can be done?

A. Not that I know of, and I know of every section of the state. I have been in every section in Oregon.

Q. All right. Have you taken into consideration the freight rates that would be involved here?

A. No; I haven't.

Q. Or the length of haul?

A. The length of haul does not appear to me to be unreasonable, considering the origin of hay that is now shipped into western Oregon. (674.)

Q. Well, if the exceptional or higher productivity of the soil of Malheur County is largely eaten up in additional freight rates, why, that would not help the situation any, would it, obviously?

A. It will depend on whether—this will determine their policy there: Whether they have livestock sufficient to consume that alfalfa hay there and get a revenue from it as large as they could by baling it and putting it on board of cars, and shipping it to western Oregon.

340 Q. And if they do have that outlet for it it will never move over the cross-State line, will it?

A. If they do have an outlet they would not ship this forty cars that I speak of hardly.

Q. You have mentioned in your exhibit a so-called Butte Falls Railroad; between what points do you have in mind that that railroad will be built?

A. That railroad was discussed, as I have heard discussed by people of Josephine and Jackson Counties, and it will extend from Butte Falls. I think there has been a survey run across there; I don't know just exactly where it is, but——

Q. From Butte Falls in the Rogue River watershed over the mountains into Klamath Falls; is that what you mean?

A. Well, it is pretty near the summit; I understand Butte Falls is almost at the summit of the Cascades.

Q. Well, where is the other end of it? (675.)

A. And it is practically up there. It would be on your line that runs from Bend to Klamath Falls some place. Just where that would be I don't know. I think I had a map here that shows that. Oh, yes; Butte Falls—the proposal is that it will go—this survey I believe would hit Chiloquin—a connection from Butte Falls to Chiloquin. That would be on a line jointly operated by the Southern Pacific and the Great Northern.

Q. That is, it would run from Butte Falls, from the watershed of the Rogue River, over the summit of the Cascades to a connection with the Southern Pacific's Cascade line, or Natron cut-off, as it is sometimes called; is that right?

A. Yes.

Q. And have you figured out the distances by that route for the tremendous pear crop of the Rogue River Valley? In
341 other words, which would be shorter, the Southern Pacific's new Alturas route, or your cross-State line, for the products of Josephine and Jackson Counties?

A. The cross-State line, I believe.

Q. How much shorter? Would it be appreciable?

A. Probably 150 miles. I don't know about that; I haven't totaled up those figures.

Q. You haven't figured it up?

A. But I think that is about right. It seems to me that I did figure it up once, but I don't recall. (676.)

Q. Well, assuming there is not any great difference in the two routes, do you think it reasonable to expect that those crops or that tonnage that originates on the Southern Pacific lines in the Rogue River Valley is going to get away from the Southern Pacific and move over the cross-State line instead of over the Alturas line?

A. I think probably some of it will go that way.

I think it will go that way instead of the Roseville line. I think some of it would go via the cross-State line—quite a little of it. I know it has moved in the past through Roseville because it had no other choice. It had to go there. I know in a general way how it is handled from Roseville on. It is handled in fruit blocks from Roseville east, solid fruit blocks. In other words, it is taken down to Roseville, Calif., and there combined with California fresh fruit shipments into solid train loads. (677.) It is true it gets expedited service that it could not get if it were not for the California fruit to be joined with it. But I see here that you propose to haul it via Black Butte. You undergo the same difficulties hauling it via Alturas line that we would across the State, if that is the way
342 the Southern Pacific is going to haul, because you connect way out there at Fernley, some place in Nevada, by the time you meet you solid fruit blocks from California.

We would expect to meet a fruit block via the cross-State line over on the Short Line. There is no question about it. There is a large icing plant at Nampa, and all the traffic which originates on

the Union Pacific, Oregon, Washington, and the Yakima Valley, comes right by Ontario.

Q. (By Mr. DEY.) But your potential tonnage, then, from Josephine and Jackson Counties depends, first, upon the construction of still an additional line of railroad from Butte Falls over into the Klamath Basin?

A. That is correct, although I think——

And then it also depends upon the shorter mileage by way of the cross-State line being so important as to divorce that traffic from the line upon which it originates? (678.)

The WITNESS. Now Mr. Dey, I think you left a little misimpression in regard to the hay discussion. May I make an additional statement in connection with the movement of hay from Malheur County to western Oregon?

Mr. DEY. Yes, indeed.

The WITNESS. The principal tonnage I show here is hay which will go to Coos County. The conditions are eminently the same as they are in Tillamook, and I am figuring on the hay consumption there, on the same rate of consumption of alfalfa hay as is now experienced in Tillamook County, for Coos County. Now I doubt if any shipments of alfalfa from Malheur County, even though there is a weevil in the station, would be quarantined against any movement to the coast, because there is not any alfalfa in the coast territory.

343 Q. In other words, you are acting on the supposition that the quarantine regulations may be let down; is that it?

A. Yes; under shipments of the bulk of the tonnage which I have listed here. In addition to that, in the four years I have been going to Coos County I have never known alfalfa hay there to be less than $22.00 per ton, and as high as $25.00 per ton, and now I know we can load alfalfa on board cars at Ontario and Vale at $12 a ton. I assume it is not going to take another $10.00 a ton to get it to Coos Bay, over the cross-State line, almost as much as the producer gets. I think it is reasonable (679) to assume that hay is going to move from Malheur County over to Coos Bay. My authority for that is the men in Coos Bay and Coos County who are leaders in the dairy industry.

Q. You think that the Malheur hay, then, will compete in the Coos Bay country against the Umatilla country alfalfa, when there is 100 miles advantage in favor of the latter in distance?

A. I think so.

Q. You would expect to pay a greater rate—to have a greater rate paid, would you not, for that 100 miles additional haul?

A. Somewhat greater.

Q. And still you think that the cheapness of production in Malheur County would offset that difference in rate?

A. I think that is right, because our data on the Hermiston project shows that the average yield there is less than three tons per acre.

Redirect examination:

The localities in Oregon in which alfalfa is produced in quantities to justify and require rail shipment of the surplus at the present time are as follows: Umatilla County, that is the Umatilla irrigation project; and then further out towards Milton and Freewater, from the Umapine district, in that section. That (680) is also in Umatilla County. A small amount moves out some years
344 from central Oregon, Deschutes and Crook Counties.

There is some production of alfalfa hay west of the Cascade Mountains, and that has been a project which county agents and the extension service of the college have been working on. We feel it is fundamental to increase the acreage of alfalfa in western Oregon, and we have been trying to do it.

Q. Has there been any real want of sufficient to supply the demand of alfalfa in western Oregon, west of the mountains?

A. It has not been sufficient to meet the shortage of legume hay, that is hay such as vetch, clover, and alfalfa, but by a very large percentage, in other words, we are just getting started on our alfalfa-growing program. We expect that to increase, but it never will increase to the point where we are going to take care of the little fellow that has a few cows and no hay. He wants alfalfa, and that is about all we have shipped into western Oregon, is just to take care of those small dairymen, to supply their needs.

As to whether in my judgment shipments of alfalfa hay in substantial quantities into western Oregon, meaning west of the Cascades—will always be needed from outside of that territory to supply the demands (681) of the western part of the State, I think that is true because the coast counties are hay-consuming counties; because of the value of their bottom lands for pasture they are going to continue to buy. The Willamette Valley we hope will be self-sufficient so far as alfalfa is concerned, with the exception of a few carloads imported, as we have listed here forty carloads per year to take care of those small dairies.

I mentioned some shipments from Malheur County of alfalfa meal, that is finely ground alfalfa hay, and in profein content
345 which is a thing that is deficient in Willamette Valley feeds, it is practically equal to wheat bran. Alfalfa meal is used for feed stock and dairy cattle. It is a desirable feed product in the dairying industry. There is no question to that. It is manufactured by putting the alfalfa through a meal grinder, ground very fine, made into a sort of flour, almost an alfalfa flour. It is considered that the weevil, if it is in the hay, is destroyed in that (682) process of manufacture. I have been told by inspectors over in that country that it permits shipments of alfalfa from a lot of the infected area.

In answering a question by Mr. Spencer, in which I attempted to compute the distance from Fort Rock to the nearest point on the Great Northern Railway, I erroneously figured an air-line distance of from 25 to 30 miles. I just took a cross section there right

straight across from a connection. As to whether the topography of the country is such there between Fort Rock and the Great Northern Railway at the nearest point that it is feasible to travel by an air-line distance, I have never been through there but I am sure you could not get through there. The present road, which was put through because of the ease of travel, goes up towards Lapine and Fremont, and then cuts over to Crescent, the former town of Crescent. It makes quite a bend then. (683.)

I spoke of the Herrick road as being built from Burns to Seneca. The name of the corporation is the Herrick Lumber Company, I understand. I could not say whether it is the Malheur Railroad Company; the people out there refer to it as the Herrick line. I do not know what the real corporate name or title of the road is.

Q. Now, Mr. Teutsch, in the figures you gave of land to be irrigated from the waters of various streams in Malheur and Harney Counties, like Silvies River and Willow Creek, and others, did
346 you give that acreage in terms of the amount of land that it was practicable and feasible to irrigate, considering the present supply of water in those streams, or did you give those acreages with reference to lands comprised in certain existing or contemplated projects, irrigation projects?

A. I based my tonnage estimates on projects that are now under construction or have been pronounced feasible. My potential tonnage, that is, the ultimate grand total tonnage, are there now. The list of irrigable lands I took from the report of the State engineer, and that is listed by watersheds and not by projects. (684.)

I use the figures of irrigable lands in my exhibit in the same sense as the figures were given in the report of the State engineer—that is, by watersheds and not by projects—not by named projects.

This so-called meadow irrigation, Mr. Spencer used that phrase—that is necessary in Harney and Malheur Counties for the production of hay. It is the old system that has been used there, and without water they don't grow any hay. There is no question but that hay is an indispensable requisite for the livestock industry. You have to have to winter your cattle and sheep most years.

Q. How would you say the livestock industry in Malheur and Harney Counties, and perhaps in Grant and Lake Counties, I don't know, compared with other industries there?

A. They are the predominating industries. Practically the total agricultural income of Harney County is from livestock.

Q. You have used in a number of places in your exhibit the words, "present tonnage available for movement across the proposed (685) cross-State line"; did you use that phrase, or those words "present tonnage available" on various sheets of your exhibit in the sense that if this line from Crane to Crescent Lake were now in ex-
347 istence and operation the amount of tonnage that you have called present tonnage would be found now in existence and available for movement across the line?

A. That is right, and would move that way—very likely to move that way, on the basis of market and all other considerations.

Q. With respect to a number of these irrigation projects in Oregon that Mr. Spencer asked you about, do you know of any element other than the various financial setups that has contributed materially to the failure or lack of success of them?

A. I think the financial aspects of the thing, as I said, is the thing that has really caused the failure of these projects. It is my opinion and observation out there that the people have got about fifty cents on the dollar of what they are bonded for. Had that not taken place I think those projects would be substantially in sound condition now. (686.)

I am familiar with the agricultural development of Harney County. There is no question but that it is a successful area in which alfalfa is produced. I think our average yield from the experiment station are 7 tons per acre. It compares quite favorably with Malheur County. I think the average yield of the county for all the production would be somewhat lower than Malheur County because of the difference in climatic conditions. Harney County is not affected by the weevil problem. There is no question but that with the construction of the cross-State line it is probable that alfalfa hay could be moved from Harney County into Coos County. The hay will be there. I didn't move it from there because I figured that the yield would be somewhat less than Malheur. That is practically the only difference.

348 Q. But if it is there and is available for movement, how would the distance compare with the Umatilla project into Coos County.

A. It would be materially less than the distance from Hermiston (687) to Marshfield.

Q. Do you know the approximate cost, or the comparative cost of producing alfalfa in Harney County with that in Umatilla County?

A. I don't know what those figures are. It would depend upon the cost of water, of course, in Harney County. Under the old projects the costs would be very low in Harney, where the water does not cost them much. I know there are some men out there producing hay for just about the cost of putting it up—no water costs at all practically.

Q. In your judgment would it be possible to move that hay from Harney County to Coos County over the proposed line, if there is a surplus produced?

A. No question but that it would.

Recross-examination:

I am employed by the Oregon State Agricultural College and the United States Department of Agriculture, States Relations Service. I am a member of the faculty of the Oregon Agricultural College, but I do not have an instructor's position. I do field work practically

altogether. (688.) It is not true that I am employed in this case, specifically by the public service commission, separate and apart from my regular employment.

The cost of growing hay in Malheur County depends on where it originates on whether it is a pumping plant or whether it is under the old Owyhee plant or project, or whether it is on some of the old ranches under the old water right. I suppose the fair average cost of production of hay in Malheur County would be around $6.00 a ton, something like that. In Umatilla County the cost is probably $8.00. In Klamath County the cost would be close to the
349 same that it would be in Umatilla.

The Oregon experiment station is that organization which has the home experiment station at Corvallis, and branch experiment stations at several points in the State, including the Rogue River Valley, Clatsop County, Umatilla County—— (689.)

This organization is part of the Oregon Agricultural College; it is part of the organization connected up with the Department of Agriculture. Just as much a part of it as I am a part of it.

Q. Now, all of this testimony that you have given about Malheur hay supplanting hay from other districts is given without any definite knowledge of the cost of production in any of these counties, isn't it?

A. No, sir; it is not given without any definite knowledge. I will have just the same thing you have there, Mr. Dey, in just a minute.

Q. All right, when you find this we will proceed.

A. All right.

Q. Now the Oregon experiment station——

A. What page?

Q. Page 4, has made an investigation, hasn't it?

A. Yes, sir.

Q. Careful and complete, of the cost of production of alfalfa hay in these various counties?

A. Yes.

With the result that it has found in Malheur County it costs $7.11 per ton to produce. (690.) And in Baker County on the Union Pacific, and Union County, where there is a large production, it costs $6.56 a ton. And in Umatilla County $8.96 a ton or $1.85 more; in Baker and Union about 75 cents or so less than the cost in Malheur County. In Deschutes County and those irrigation districts the cost is shown as $8.41 or $1.30 more than Malheur County.

350 Q. And how much nearer are the alfalfa producing areas of Deschutes County to Coos Bay and all of these other western Oregon counties, than your Malheur County with your cross-State line completed?

A. Let's see; about, from where we would originate this hay, 150 miles.

Q. Nearer?

A. Nearer than points in Malheur County.

Q. In other words, they raise this hay around Pineville, don't they?

A. Yes, sir.

Q. And Bend, and that country around in there?

A. Yes, sir. (691.)

Q. And all they have to do is to send it down here over the Great Northern line, for 65 miles to a connection with the Natron cut-off, then it comes over the Cascade Mountains and it is in western Oregon, isn't it?

A. They don't raise a surplus of hay in the counties you are talking about, nor do they in Klamath County——

351 Q. I know, but they have lots of lands up there that will raise hay, haven't they?

A. Yes, sir.

Q. They produce it for $8.41 a ton in Deschutes County; that is established, isn't it, by this?

A. Yes, sir.

Q. And over in Klamath County, which is very much nearer to western Oregon and to Coos Bay and these other districts we have been talking about, they raise it for $7.62, or only 51 cents more per ton, than they raise it in Malheur County, which is the prize county you have been talking about?

A. Yes; the local price will determine whether they can ship that hay out or not. If they can get as much for it in Klamath County, Deschutes and Crook Counties as they can for shipping it, they won't ship it because they will keep it on the farm.

Q. For the same reason, if the Malheur raisers can get as much for it by keeping it and feeding it to livestock instead of shipping it, it won't move across the cross-State line, will it? (692.)

A. No; it won't move, if they have the livestock and can get as much from it they won't ship across the State. Now these Malheur County cost figures here, $7.11, are taken, a good many of them, under pumping plants that lift water 100 feet out of the Snake River. Those costs are higher than they are going to be on the Owyhee, in my opinion.

Q. Well, it is all in Malheur County, isn't it?

A. Yes, all in Malheur.

Q. And that is the county you want to produce this alfalfa?

A. They are going to produce this hay we propose to ship on the Owyhee, or on the Vale project—the Vale project. There they will have 40 years to pay for the water right in, without any interest. Now then, if you will turn to page 11——

352 Q. Just a minute, now. If you will turn, please, back to this page 4 for a moment. The average of all of this is $7.90, isn't it?

A. $7.99.

Q. That 99 is blurred here. All right, $7.99. That is the average cost of the counties set forth, including Malheur. Now then, have you ever shipped any hay?

A. Yes, sir.

Q. You know it is one of the least productive commodities, so far as the railroads are concerned, don't you? (693.)

A. I don't know as to that.

It is true it does not load as heavy as lots of products and usually takes a very low rate.

The average importations of hay in Coos and Curry Counties are about 2,500 tons per year now. Part of that comes in by boat. I believe about 600 tons of it comes in by rail. Maybe that is increased a bit since I got those figures.

Q. I think you are about right there. You have 600 tons here in one place and 40 cars. That refers to Lane County. But our figures show there were imported into Coos and Curry Counties 57 cars by rail from September 1, 1926, to May 31, 1928; that is about a year and nine months period.

A. Let's see. What period was that?

Q. From September 1, 1926, to May 31, 1928, about a year and nine months. Thirteen cars from the Rogue River Valley and 44 cars from eastern Oregon and Washington.

A. Yes, sir.

Q. Now, then, with those figures, which you will find I think to be accurate, how do you explain the fact that in 1924 there were 167 carloads of hay went into that same territory, those two counties, in one year—Coos County alone, I guess. (694.)

353 A. Yes; the reason for that was very largely that what moved in there in 1927, a large percentage of it was used in the logging camps, by teams employed in logging. The dairy industries have expanded; logging operations have slackened off considerably, decreased. Therefore you have had decreased shipments by rail to Coos County, and perhaps the boat shipments into Coos County may have increased during the period which you have a record of.

These logging camps did not use more alfalfa hay than all the dairy interests down there. You (Mr. Dey) are not talking about 167 cars of alfalfa hay—you are talking about 167 cars of hay. I don't think that is alfalfa hay. I think that is all hay that you are speaking of there.

Q. Well, I will say 57 cars of hay of all classes.

A. You ask me how to explain the difference?

Q. Moved in there in the last year and eight months, whereas in 1924 there was 167 carloads moved in in one year; and isn't it a matter of fact that due to the advice that has been given by the Oregon Agricultural people to those people to raise their own hay, and the consumption of hay is actually falling off? (695.)

A. No; I don't think that is correct. I think that the substantial decrease is for the reason that I gave. In fact, we do, and always will, advise farmers to grow as much hay as possible, and you will find in the report of the Coos County economic conference, in which were represented a recommendation that they use their upland soils for the production of legume hay; that means clover or vetch, which is a good dairy feed. Well now——

Q. They have been doing that to an extent, but not enough to appreciably affect the hay importations. The valley lands, the bottom lands are valuable for pasture. The upland soil in
354 Coos County does not amount to ten per cent of the area. It is actually tilled and then planted and hay grown. The valley lands produce most of the hay that is produced in Coos County, and the very dairyman that wrote this report told me just a short time ago—that was the chairman or the manager of the Melowest Creamery—that they would like to ship in alfalfa hay in large quantities; that they would like to deal with these people, the producers over in Malheur County, if they could get this hay, releasing this land, or releasing hay land for pasture, and they would get a larger return as a result of doing it.

Q. All right; he may have told you that. I will accept your statement of that. But I want to know if it is your judgment (696) that the consumption of hay in Coos and Curry Counties dropped from 167 carloads in 1924 to 57 carloads over a period of a year and a half, because of cessation of use of hay in the logging camps where they feed a few horses, perhaps, or mules, or whatever stock they had there; is that your statement?

A. I think that is very largely the reason for——

Q. And is that the principal reason you account for this decrease?

A. For the decreased shipment of hay I wish you had the figures as to the classification, the amount of decrease in alfalfa that was actually shipped in.

Now the logging camps are still running over there to some extent. The big mills in the Coos Bay district are not running. They have not been running for quite a considerable period. The Stout mill was running in 1924; it is not running now. The business men in Coos Bay told me that their production there is greatly curtailed. The number of men they employ in logging camps is much less than it was in 1924. You can go down there and look at the city (697) and observe the same thing yourself, if you were there in 1924, as compared with 1927.

355 Sometimes they have quite a few head of stock around a large logging camp. The livestock used in the logging industry down there does not amount to a drop in the bucket compared to the dairy industry. Another point you have not taken into consideration is the amount that moves in by boat. Now it may more than offset the figures you have here; I don't know that and you don't either, but I am of the opinion that they did.

Q. Do you think that is going to stop when they begin shipping alfalfa hay from Malheur County, where it costs $7.11 a ton to produce it?

A. It depends on how cheap they can get it there. If they can get it cheaper from Malheur County they are going to get it from there.

Exam. ROGERS. I wasn't certain, Mr. Teutsch, just what tonnage you show for this so-called desert area, this area seventy-five miles square they have been talking about here. What do you allow for that in your estimate?

A. Well, that so-called desert area, Fort Rock Valley, is in (698) that section. The development—the potential tonnage which I have estimated as coming from the Fort Rock and Christmas Lake Valleys, will originate in this—you might say this: The tonnage in Lake County, Northern Klamath County, portions of Harney County, would all come for the so-called desert country.

Exam. ROGERS. What is that lake, northern Klamath and what else?

A. Harney.

Comr. MCMANAMY. Is that what is termed the high desert country?

A. Yes, sir.

Mr. MCCULLOCH. You said parts of Harney County, didn't you?

A. Yes; parts of Harney, the western part of Harney County.

Exam. ROGERS. And what you have said with respect to those three portions might be termed as being said as to the high desert, so-called?

356 A. Yes.

Q. (Exam. ROGERS.) What is your observation as to the percentage of irrigated lands generally that are being farmed or used?

A. The percentage of irrigated land generally that is being used now, it depends altogether, Mr. Examiner, on the district in which you are. Some of it 100 per cent. Now projects like the Ochoco, which have had financial difficulties, a small percentage (699), and the financial difficulty is the reason for it. Now the old projects that are sound, take the project there near Redmond in Deschutes County, there is an adequate water supply, adequate supply of cheap water, and practically 100 per cent is settled, reasonably good land.

Exam. ROGERS. What area has it?

A. And the old projects in Malheur the same way, 100 per cent. The Owyhee project, the old project there is 100 per cent sold and farmed.

Exam. ROGERS. What I was getting at is the point as to whether the supply, you might say, of irrigated land is such that even though more land is put under irrigation it won't be necessary to farm it in order to produce a crop?

A. It has to be—if the project is constructed it has to be put under irrigation. It will be put under irrigation, if it is economically sound. That is the question that determines that, the economies of the project. If crops can be produced there at a profit, it is going to be farmed and it is going to be settled. The thing about these new projects in Malheur County, there never has been in the history of irrigation precautions taken that have been taken on the Owyhee and on the Vale projects under Dr. Mead. Never before has the Reclamation Service, with some twenty years of experience behind it, weeded out of the total area of these projects all of the land that is poor land, only using the land that they (700) know can
357 be irrigated as assessable acreage. Now, with that as a basis you can expect a rapid settlement of those projects, because they do not have difficulties, the lack of the previous soil survey, that many of the other projects have been constructed under. Umatilla, for example.

Exam. ROGERS. You think these projects you have listed here will be utilized when they are ready?

A. There is no question about it at all in my opinion. I know that country. I know its productiveness. I know there are thousands of acres of land farmed, not producing economically as those lands will. That is the basis for any business—it is economy of production.

Exam. ROGERS. When Mr. Madden was on the stand there was some mention made of a duplication in his exhibit and yours. Will you straighten that out for us.

A. I believe I indicated at that time. I asked Mr. Madden the number of carloads which he originated on the Owyhee project, and that is in his exhibit. Do you have a copy of that exhibit here?

Mr. THOMPSON. 238 in five years, and 238 after five years.

The WITNESS. 238 carloads within five years and 238 after five years. That would be the only duplication. In other words, in my tonnage available within five years there would be that duplication there. From potential tonnage 238.

Mr. MCCULLOCH. Here is the page of his exhibit (showing (701) witness).

The WITNESS. Oh, yes; that is right.

Exam. ROGERS. In arriving at your estimates, Mr. Teutsch, did you use a uniform yield per acre for all the counties, or did that vary with the counties?

A. It varied with the counties, absolutely.

Q. (Exam. ROGERS.) Have you made any computations as to the number of people that would be required to carry into effect these estimates that you have given?

358 A. The number of people that would be required.

Exam. ROGERS. Yes.

A. Approximately so. There would be on the Owyhee 80,960 acres of new land. I figure an efficiently irrigated farm is a farm of about 80 acres, and that would be 1,012. I believe that is right isn't it, approximately 1,012 new settlers on the Owyhee alone? The Vale will be about in that same proportion, 80-acre farm—what was the total area of the Vale project? 24,000, wasn't it?

Mr. McCULLOCH. That is here.

The WITNESS. 24,780. Divide that by 80 and you will get the approximate number. 320 would be about it. It would be about 200 on the other projects in Malheur County.

Exam. ROGERS. Now that means, for example, for Vale 320 (702) farms?

A. That is it.

Exam. ROGERS. How many people do you allow to a farm?

A. Probably about four or five. That would be a farm family; you see, it will be a man, wife and probably on an average of five, probably.

Exam. ROGERS. What about the increased production in other counties outside of these irrigated lands and irrigation projects? Would there be an increase in population, if your estimates were realized?

A. Well, there would be an increase in the number of farms on these pumping projects, for instance. They will be put on a more sound economic basis. There should be more farmers on that 46,000 acres of land which will be irrigated from the Owyhee and pumping projects displaced. Now as to how many of that would be, would only be a guess as to the increase. I think there would be an increase but I don't know as to how much. There might
359 be a considerably larger number of families than what I have indicated only for each 80 acres, but I take that figure because our studies indicate that under Malheur conditions an 80-acre ranch is about the most efficient ranch.

Mr. DUNCAN. Mr. Examiner, may I ask a question right there in that connection? Isn't it true that the Reclamation Service, Mr. Teutsch, has established 80 acres as the farm unit size in those two projects, and will require its cultivation (703) in units not to exceed that?

A. Yes, that is right. They will permit 40-acre tracts—rather encourage 40-acre tracts.

Mr. DUNCAN. They will permit as much less than 80 as a farmer will take care of?

A. Yes.

Mr. DUNCAN. But not more than eighty?

Mr. McCULLOCH. Mr. Commissioner, I just wanted to request that the witness be given an opportunity to make some comment that he was interrupted in starting to make when Mr. Dey was questioning him about cost of producing alfalfa hay in different Oregon counties.

Comr. McMANAMY. He may make it.

The WITNESS. It was in explanation of Mr. Dey's point about the cost of yield. On page 11, Mr. Dey, of that cost study you will find a chart which shows the relation of yield of alfalfa hay to the cost of production, and as a result of that study listed in that chart you will see that a two-ton yield or under cost $12.46 a ton to produce;
360 that 2.9 tons (704) cost $9.73 per ton to produce; that a 7-ton yield, or over, cost but $5.86 to produce; and that is the point that I was making as to the yield in relation to cost, the reason why hay would come from Malheur County.

Mr. DEY. Why yes; but that does not answer the proposition that these people from your institution have stated that it cost so much to produce a ton of alfalfa hay in a particular county, does it?

A. No; they have taken, of course, the figures on the pumping units and all the other units.

Mr. DEY. They have taken into consideration, have they not, the formula you have just referred to, of course?

A. Yes, sir. (705.)

361 PORTLAND, OREGON, *August 7, 1928.*

J. P. NEWELL was thereupon produced as a witness on behalf of complainants and, having been first duly sworn, testified as follows:

Direct examination:

I live in Portland. I am a civil engineer. I have practiced my profession for forty-one years. I was three years regular student, Massachusetts Institute of Technology, and then for about twenty years in railroad work, both in the office and field, construction, location (707), maintenance. About fourteen years of that time I was in the employ of the Oregon-Washington Railroad & Navigation Company, and for the last three years of it I was division engineer in charge of maintenance of way of the Oregon lines of the Oregon-Washington Railroad & Navigation Company. Following that I went into private practice, and the large part of my time since that has been on valuation and rate work and studies of cost of service. I have been consulting engineer for the Oregon Public Service Commission since 1909, and I have engaged in valuations of all the railroads, all the important railroads, in the State of Oregon—the valuation of the Portland Railway Light & Power Company's property, and some smaller ones.

In 1918 I went to Toronto for the Canadian Dominion Government, and was on their staff in charge of the engineering work connected with the taking over the Canadian National Railroads; that was an arbitration as to the amount to pay for their stock. That, I think, required about five months.

In 1920 I was similarly employed by the Canadian Government in the taking over of the Grand Trunk and Grand Trunk Pacific, again an arbitration as to the value of the stock. I was there a year and four months on that work.

362 I have been engaged here in various rate cases. In 1919 (708) I made a study of the cost of service of the railroads from the inland empire to tidewater in connection with what is called the Columbia Basin differential case. I appeared again in that case in another controversy over that same rate in 1924, and have just completed testimony in it in the present case now being heard. I mean the grain rate investigation, I. C. C. 17000, part 7. I have, in connection with the cost of service on the lines here in Oregon and Washington, in the last nine years up to the present time, made and introduced in evidence before the commission in various proceedings three analyses of cost, but in the second one, in 1924, in the hearing held at Walla Walla, I didn't go very far into the matter. I simply took a former study and showed in what respects it might differ at that time.

I prepared and had received in evidence a comprehensive study and analysis of costs of moving wheat traffic in the Pacific Northwest for the grain rate investigation. (709.) I have just completed that work. I have prepared an independent analysis of cost of service and study covering other matters for use in this particular proceeding. I began it two years ago this past spring, about April or May. I haven't been at work continuously on it during that time, but I have put in the greater part of my time since that date. The underlying information and data for that cost study have been printed and embodied in pamphlet form for convenience of the commission and parties in this proceeding.

(Said pamphlet was thereupon marked for identification, "complainant's Exhibit No. 16, Witness Newell.") (710.)

On page three of the exhibit, in a note addressed to the Public Service Commission of Oregon, where I mentioned the Union
363 Pacific Railroad I meant by that the Union Pacific system, including the Oregon Short Line, Union Pacific proper, and the Oregon-Washington Railroad & Navigation Company. Turning to page 7 of my report: There are three objects that the public service commission had in petitioning for an order requiring the construction of a railroad from Crane to a connection with the main line of the (711) Southern Pacific, and they were to reduce the distance to eastern markets for a large part of western Oregon, to open up to settlement that territory in central Oregon which cannot be brought into use until it has rail service, and, third, the reduction of distance from southeastern Oregon and southwestern Idaho to Pacific coast markets.

It is not the intention of the Oregon commission to dictate as to the route, but in order that comparisons may be intelligible the figures presented here, first, are those based on the route selected by the Union Pacific at the former time when it itself was proposing to build the line across the State. If that line is built, it will shorten the distance from Eugene, which I take as a central point

for western Oregon, to Granger by 429 miles, as compared to the present route through Roseville. It will bring Burns, in central Oregon, 169 miles nearer to Portland, and Boise, Idaho, will have the distance to San Francisco shortened by 273 miles as compared with the present route through Ogden.

The differences in distance at Granger will apply equally to all points east of Granger on the lines of the Union Pacific system and its connections, because all movement would be through Granger by any of the routes under consideration. (712.) Through-
364 out my cost study I have used this point Granger. That is, either by Crane and the proposed line, or via Roseville and Ogden or via Alturas when and if the Alturas line is built. As to whether the Rogerson-Wells line of the Oregon Short Line, which has been built and put in operation since the previous hearing in this cross-State line case, has shortened in any way the distance from Boise that I just mentioned a minute ago to San Francisco, as compared with Ogden, would say that it offers a possible route from Boise which would be 183 miles shorter than the route commonly used through Ogden, and, therefore, as compared with that line the cross-State line would reduce the distance of Boise to San Francisco by 90 miles. I can't say what the Oregon commission had in mind in regard to a reduction in rates by reason of these shortened distances, but nothing which I have to present is based on any difference in rates in consequence of the shortening of lines. (713.)

There is a map at the back of this report which shows the distance. I believe, however, copies of that have already been introduced in evidence.

Now, the Southern Pacific proposes to build a hundred-mile link between Klamath Falls and Alturas, which would shorten the distance from Eugene to eastern points by 210 miles, and would have no effect on the other distances which have been named. A comparison, however, in this report is made with the Alturas line, as well as with the existing route. The first subject that I have investigated is a determination of the cost of the haul by each route under consideration, and I take the study (714) which I
365 presented to the commission in the hearing on docket 17000 of the cost of service in 1925 on the lines in Oregon of the Oregon-Washington Railroad & Navigation Company, supplemented by a similar analysis of cost on the Oregon Short Line, then by suitable modifications which I explain in detail I have worked out a set of unit costs to be applied to each road or district over which haul is to be calculated.

In my study of the cost of service on the Oregon-Washington Railroad & Navigation Company and the Oregon Short Line the statistics of 1925 were the latest available at the time I began the study. The crucial point in this case is the possibility of justly re-

quiring the Southern Pacific to interchange traffic originated by it in western Oregon with the Union Pacific at Crescent Lake. Freight destined for Union Pacific points is now hauled from Eugene through Roseville to Ogden, a distance of 1,194 miles. Building the Alturas connection would reduce that distance, but I take it for granted that the division of earnings would not be changed. The Southern Pacific, of course, gets a larger share of earnings on that basis than it would on interchange at Crescent Lake, which is only 96 miles from Eugene, but my calculations of the cost of haul by the different routes show that the saving which can be made on haul via Crane (715) will be sufficient when divided between the carriers to make interchange at Crescent Lake more profitable to both carriers than that at Ogden. (716.)

It is possible to make such a division of joint rates of the net earnings that the net earnings of the Southern Pacific on the short haul will be equal to what it could make on the long haul by way of Alturas and Ogden, and still leave enough for the Union Pacific
366 so that its net earnings per mile will be greater on the haul from Crane to Omaha than they are now on the haul from Ogden to Omaha.

And I then show that the traffic now moving between western Oregon and Union Pacific points, together with new business available in central Oregon and Idaho, are sufficient to make the proposed cross-State line profitable from the beginning.

I repeat here the cost of service which has been presented in the grain rate hearing, of the operations of the Oregon-Washington Railroad & Navigation Company on its lines in Oregon in 1925. What I am after there is to obtain a set of unit costs which may be applied to specific freight movements. I make an analysis of the actual expenses of the company, dividing them into classes, and then dividing classes into units of operation. I am continually considering the entire cost of the operation. Then after I obtain these unit costs I again take any given freight movement and find the number of unit operations involved in it and apply the appropriate cost to each, making allowance for departure from (717) the average conditions, if any such departures exist.

The unit costs are in costs of operations as averages of all the operations of the company.

The first thing that has to be done in any study of that nature is to separate out those expenses which are not affected by the volume of traffic, because they are a constant charge against the business of the road, whether it is large or small. I call those indirect expenses, while to those expenses which do vary with the traffic I call direct expenses.

367 Now, some expenses are affected by the variations in traffic in one unit and not by others. That is, the cost of trainmen is affected by the cost in train miles but it is not affected by the car miles in the train.

That statement is in general true. It is slightly in error as regards the State of Oregon, in which when trains exceed a certain number of cars an extra trainman is required.

I use the word "traffic" in this connection. It is understood to be measured in the unit applicable to the account under consideration, and the variations considered are in quantity only, without any change in car loading, train loading, or balance of traffic in opposite directions, or any of those characteristics which affect the total cost. I have to exclude those, because they would otherwise confuse the effect of variatioins in volume of traffic with the effects produced (718) by the changes in efficiency of the operations. I do not attempt to take into account my variatioins in traffic. Those are constantly possible without any paricular effect on expenses. You can put a few more tons of freight onto the same equipment and carry it at an additional cost that does not amount to anything, but if that is continued for any length of time and grows to any considerable volume it does affect the expenses. You have to put on additional equipment and facilities, and then there is a sudden jump in the cost of operation, and that ought not to be attributed entirely to the last addition to the freight traffic of the company. And before a change like that the operating cost per unit is less and afterwards it is more than normal, and I have attempted to keep away from those extremes.

368 There are certain operating expenses that are partly direct and partly indirect, because both natural causes and traffic affect them. That is particularly the case of maintenance of way expenses. There is going on at the same time wear caused by movement of trains over tracks, and the effect of natural causes, like decay and rust in their effect on the equipment and on the track. Now, the effect of those natural causes is not affected at all by traffic; it remains the same without regard to the volume of the traffic; but its ratio of course to the total expenses grows less as the traffic grows larger. (719.)

Then transportation expenses are partly indirect from another cause. When a railroad begins its operations it is necessary to put on a certain initial equipment so as to give service everywhere, regardless of whether the traffic amounts to anything or not, and for a time that equipment is only partly used, and as the traffic grows there is no particular change necessary in the amount of service or in the amount of equipment used, so that there is not any apparent effect on expenses. But when the time comes that those facilities are used up, then it becomes necessary—I mean when they are fully used it becomes necessary to add facilities as the traffic grows, so that after that the expenses on both the maintenance and the operation of that equipment would be fairly proportional to the traffic itself. So that, indirect transportation expenses would entirely disappear, if it were not for the fact that a growing system is constantly adding

portions of mileage in which these same conditions are repeated.

369 This necessity of providing additional facilities as business grows affects also the direct, the proportion of the maintenance expenses; for I think it is obvious that if the facilities themselves are made necessary by the growth of traffic, then their maintenance is also to be considered as made necessary by the traffic, and that is the reason that I put maintenance of tracks and yard tracks under the head of a direct expense. By this means of ascribing the expenses of (720) maintaining and operating partly used facilities and equipment to direct cost in proportion to the extent to which it is used and actually needed, I charge up to direct cost only the cost of maintaining and operating the equipment and facilities used to approximately normal capacity. I do not mean by that that each train is loaded with all it can carry, because there are constant fluctuations in the volume of business, and equipment and facilities must at all times be sufficient to take care of those fluctuations and must therefore always be a little in excess of the average requirements, but when the volume of traffic gets to be such that the excess of capacity over the average requirements is only enough to take care of the peak loads, I consider that this equipment is used to normal capacity and that further increase will call for more equipment.

Now in any consideration that takes up the matter of rates or of real net earnings or income, it is necessary of course to take in the indirect cost which I exclude from the direct cost, but it must come in the same manner as all overhead expenses, and the return on the investment; that is, it is simply to be carried by the entire volume of traffic and can not be ascribed directly to any particular traffic.

370 In estimating these direct and indirect proportions of operating expenses I go over the entire accounts one by one, taking them, however, sometimes in groups which are so related (721) that they can be considered all together. Many of those are obviously either direct or indirect wholly, or almost wholly, and others have to be estimated on the basis of judgment and experience. For a few of them, a very few, I have used a method that the American Railway Association recommends for comparing maintenance of way expenses. In general that consists in comparing the density of traffic and the expense per mile in the account under consideration on different roads and observing the extent to which the expenses of railroads on heavy traffic exceed that on light traffic, and for those I selected thirty American railroads, the majority of which are in the northern part of the United States and operate under conditions that make them fairly comparable to the Union and Southern Pacific. I have left out roads who were confined principally to freight or to passenger service. I have determined these relations over several years, but I do not compare one year with another,

because in doing that I might run into conditions due to rise or fall of wages, and other conditions, that might not be uniform through the different years. I have taken the volume of traffic and the expenses from the records of the Interstate Commerce Commission. (722.)

371 Well, in each case I divided these thirty railroads into two groups, putting those which had more than the average density in the one and those which had less than the average density, that is the average of the thirty below (723) it, and then I found the average expense per mile for each group. Then I assume that the difference in expense in the two groups is due to the difference in traffic density, and from that establish a relation between a given expense for a given amount of traffic and the percentage of it which would be due to the traffic itself. That part is merely mathematical. There is a formula here expressing it, but that is only a mathematical showing, and I think it is hardly necessary to go over it.

The only important accounts to which I have applied that method are track laying and surfacing, and the maintenance of station and office buildings. If I may I will go on and come back to that.

372 If you will turn to page 65 of that report (Exhibit 16a) (724) you will find a table for the year 1915. Now for the year 1915—by the way, I used here only 16 western roads. There seemed to be, on study of the report, such a difference between eastern and western roads for some reason, probably largely connected with wages, that it seemed several of the eastern roads were not in line with the western, and I used, therefore, only these 16 western roads for comparison. But you will notice there I have taken these roads and I have found the number of equipment ton-miles for mile of main tracks and arranged the roads in order of density. The first six have a density greater than the average of the 16, and the remaining ten have a density less than the average. And then I take the average—the amount of track laying and surfacing per mile for each of these roads. That is shown in the last column.

You notice then that the first six roads having a density represented by 5.48 spend an average of $367.00 per mile of track, while in the second group the density averaged 3.81 and the expenditure was $270.00.

Taking those group averages as indicating, therefore, the effect of traffic, I calculate for a given density the percentage of the total expense under that heading, which would normally be independent of the traffic, and the remainder of course being that which is

373 direct or variable with the traffic. (725.) The results obtained by study of different years in this way vary sometimes quite widely. Undoubtedly a consideration of one year alone would not be sufficient, especially in regard to maintenance of way expenses, because, as a general rule, a railroad company having a year of good business is likely to spend a greater amount on its

maintenance in the succeeding year than in the year in which the traffic is actually handled. So that it is necessary, in my opinion, to consider several years in order to get anything that is valuable as a guide in that line. I would not have used these figures exclusively, figured ratios obtained in this way, if I had any other guide, but in one or two cases there seems to be no other guide that I could get, and I have used figures obtained by the average of several years calculated in this manner.

Now, in order to apply that maintenance of way, I have used what the American Railway Engineering Association calls equivalent ton miles as a measure of the density of traffic. They estimate that the damage per-ton mile to track by passenger cars is twice that of freight cars, and the damage from locomotives twice that of cars, and therefore I multiply passenger locomotive ton miles by four, passenger car ton miles by two, freight locomotive ton miles by two, and add those to the gross ton miles of freight cars. That obtains an equivalent in tons of cars and freight in freight cars as the measure of the traffic passing over the road. (726.)

It was brought to my attention in the other hearing preceding this that this same association has made some slight modifications in these ratios, but they happen to apply only to locomotive—
374 to passenger equipment, and therefore would have but a very slight effect on these calculations as fas ar I have used them. I am referring to the manner of the use of that table on page 65. I was referring to what is stated in my exhibit (Exhibit 16) on page 12. That is, on page 12 I describe how I get a unit of traffic to measure density. Now, taking up these accounts one by one, superintendence, I simply divide on the same basis as the average of all other accounts under that head put together, superintendence on maintenance of way. For roadway maintenance it would appear from the classification that practically none of that would vary with the traffic, but, as a matter of fact, my study of the expenditures of the roads shows that there is a constant tendency to increase that expense as the business of a road increases. (727.) Using the tables, or tables similar to those which are given in the appendix [of Exhibit 16a], would show that the expenses of the Oregon-Washington Railroad & Navigation Company in 1915 and '16 would run about 45 per cent direct, and 1917 only about 10 per cent, and in 1924 it would run up to 70 per cent. I think that the reason that the expense grows with the traffic is simply in the fact that the roads as they have more traffic pay more attention to the appearance of their right of way, keep their posts and signs and such things, and fences, painted better, and line up the edges of their ballast, trim it up, give it a neater appearance, and pile up stones around posts and whitewash them, and do various things of that kind, the expenses of which run to quite a little money and which are not an
375 actual necessity at all as regards traffic. (728.) I think it is proper to treat that as though it were a real necessity, but in

this case we are dealing with roads of lower traffic density than the average of those under consideration and through a rough country, and, therefore, I think it is sufficient in this case to attribute ten per cent of this account to direct. That figure, you see, is not derived from these other calculations.

Bridges, trestles, and culverts: No comparison of one road to another could indicate anything, because of the variety and extent of such structures. I merely present my own estimate that for the Oregon-Washington Railroad and Navigation Company the maintenance of those structures would amount to 25 per cent—that 25 per cent of the maintenance of those structures would be caused by the effects due to traffic, as distinguished from natural causes.

In ties, also, comparison of one road with another doesn't give much of a guide, because of the wide variations in the character of ties and cost of them in different parts of the country. I estimate that the effect of wear on the main track of the main line add 30 per cent of the maintenance and on branch lines I consider it negligible. It would exist in smaller quantity, perhaps, on the heavier traffic branch lines, but in any case it is a very small matter. On side tracks in yards and commercial tracks I consider that all direct, because, I have already stated, I think those tracks themselves are (729) there because of the traffic and are there in proportion to the traffic, therefore, their maintenance is proportional with the traffic.

There is an apportionment of these tracks on page 19, and when I come to that I will show how I get 24 per cent of that
376 entire account as direct.

Rails, other track material, I consider that the entire expense for maintenance is due to traffic, none to natural causes.

Now, on ballast, if I take eastern roads as a group and study them in the manner indicated by the tables in the appendix I get a figure of 56 to 60 per cent as the effect of traffic, but on western roads, treating them in the same way, it would appear that the ballasting expense increases faster than the traffic. That is due to the fact that the roads of low traffic density are likely to have considerable lightly ballasted track, and its maintenance perhaps costs more than that of the heavily ballasted track, even with heavy traffic, but deterioration of ballast undoubtedly takes place in some degree from natural causes, and for the roads under consideration here, the Oregon-Washington Railroad & Navigation Company first, I estimate at 50 per cent of the expense.

In tracklaying and surfacing: In this account I can find no better guide than that indicated by a study and comparison with the other roads, the sixteen western roads, and taking the (730) average of the four years 1915, 1916, 1917, and 1924 I find an average of 64 per cent direct as the figure which I apply to that account.

For station and office buildings the extent to which their maintenance is due to traffic is another that is very hard to estimate. For

a comparison on the basis of traffic I took the tons originated per mile of road. The reports of the Interstate Commerce Commission do not separate these accounts between freight and passenger,
377 but I find some figures covering the eastern districts and the western districts for 1916 which show the expenses apportioned to freight. They were, for the eastern districts, $56.00 a mile, for the western roads they were $20.90 a mile, while the tons originated on the eastern roads were 9,800 per mile, on the western 3,000 per mile.

Working this out mathematically would indicate that for the Oregon lines, with the number of tons originated 2,000 per mile, if that were strictly in line with these others in its fuel expense it would give us 65 per cent direct expense, and since that seems to me in my own judgment a reasonable figure I have used it for structures on the Oregon-Washington Railroad and Navigation Company.

Water stations show quite regular records for the effect of traffic on the basis of locomotive miles per mile of road as the unit of traffic density. They would indicate that for the (731) Oregon-Washington Railroad and Navigation Company about eight per cent of that expense was in accordance with traffic.

For fuel stations they are irregular, with the average a little over 50 per cent, and I have used that ratio.

Shops and engine houses: I have tables in the appendix showing the relation of that expense to traffic, and I have estimated it from these calculations for several years as 80 per cent direct.

Telegraph telephone lines: I estimate half of those repairs due to use.

Signals and interlockers: Half of it proportion to the traffic.

Then such accounts as expenses, crossings, and signs, wharves and docks, paving, removing snow, ice, and sand, assessments
378 for public improvements, tunnels, and subways, are not related to traffic at all; they are entirely indirect.

And certain other minor accounts are apportioned simply on the basis of the average of all the other accounts. They are such accounts as stationery and printing, and others of that nature, small tools and supplies, and the like.

And joint tracks and yards: I consider that the charges there are based on the proportions of traffic use of the carriers using them, and, therefore, that would be a direct expense.

My conclusion as to maintenance of way and structures, expenses (732) I use as direct and indirect, would say that if you will turn to page 26, you will find where these are all gathered together in the table. I will comment on that right now because it would be advantageous to do it. When these are added up I get a figure of practically 50 per cent direct on the maintenance of way, almost exactly 50 per cent. Maintenance of equipment, I consider that as an entire group as being entirely direct, 100 per cent.

Traffic is a small portion of the total expense. There are outside agencies. Their expense would, in the main, I think, be affected somewhat by the amount of traffic, although it would be rather a round-about method of getting at it, because the expense would be incurred and the traffic might result at a considerably later time, but I have estimated that at 50 per cent direct.

Membership in traffic associations, and expenses of that kind, I have considered entirely indirect.

The expense of industrial and immigration bureaus, the same as outside agencies, 50 per cent direct.

379 Now, under transportation expenses, that group would be entirely a direct expense if it were not for branch lines on (733) which the traffic is below the capacity of minimum service that has to be provided.

At the beginning of operations every district has to have service that is governed by the needs of the public, rather than by the actual traffic which is there, and the public is served with a small number of short trains, and the growth of traffic at first then consists simply in adding on cars. It doesn't affect the number of trains, and it doesn't affect expenses which are dependent on train mileage. There are certain other accounts, like yard expenses, which vary chiefly according to the car mileage, so that whenever traffic grows so that it means more cars, then these expenses become wholly direct.

Fuel and water supplies for the locomotives are a little increased, but not in proportion to traffic, by that growth of traffic which can be cared for by simply adding cars to the train, so that these accounts do not become wholly direct—do not come to be in the exact proportion to traffic until it becomes necessary to put on increased trains as well as more cars.

There are two classes of freight trains for my purpose—through freight trains on the main line—I consider that those are not sent out until tonnage is on hand to make up full trains, so that their expenses are all direct. (734.)

And the way freights and mixed trains constitute the whole service on many branches, and sometimes a part of it on the main line. The way freight service on the main line I consider

380 100 per cent direct although the traffic per train is less, and the expense, therefore, greater per ton than that of the through train, it is a necessary part of the service, and it is fair to assume that the trains as a run are as heavy as service of that nature will permit. Their business is that of picking up and discharging freight along the district, and they do that going in both directions, both picking up and discharging as they move in either direction. But on a branch-line train it does practically all of its unloading while it is moving away from the main line and its picking up while it is coming back, and, therefore, it is not possible for a branch line way freight to handle as many cars as a main line way freight.

I estimate that these branch lines on the Oregon-Washington Railroad and Navigation Company carried a half of this lesser capacity, and, therefore, put their service down at 50 per cent direct.

This does not apply to train mile unit costs, for those would be almost the same with short trains as with long ones, and so in order to overcome that mathematical difficulty of treating expenses directly—entirely direct for one unit and partly so for another, I have considered it as partly (735) direct and then correct it as regards train miles by reducing correspondingly the number of train miles when I come to divide the total train mile costs by the number of train miles. That will be explained further later.

The main line train miles of the Oregon-Washington Railroad & Navigation Company in Oregon amounted to 1,056,048, and
381 those of branch lines 280,337. Taking the latter at one-half the value of the others reduces it to 140,118, with a total of 1,196,166, and that is 90 per cent of the total number of train miles actually run. So I consider that the train service of the Oregon-Washington Railroad & Navigation Company in Oregon was 90 per cent direct.

Dispatching train I consider entirely a 100 per cent direct account.

Station employees are calculated in the same way as I have explained for maintenance of stations. I found that in 1916 on the eastern roads the expenses in proportion—the expense of station employees seemed to increase in practically exact proportion to the density of the traffic as measured in tons originated per mile of road. That is on 1916. A similar comparison in 1924 showed them increasing somewhat faster than the traffic itself, but I don't think that could be true of roads in this country, which have to traverse more or less sparsely settled country, where there are a good many employees kept merely from the necessity of giving service to the public (736), and who in their various capacities handle a very much larger amount of traffic than they do, so that an increase of traffic spread uniformly over the entire system in the same proportions would not increase expenses in those districts. So that for my purpose here I estimate that this expense on the Oregon-Washington Railroad & Navigation Company is 85 per cent direct.

I take the same figures for station supplies and expenses, the same proportion as station employees.

Weighing and inspection and the like I consider entirely proportional to the traffic, and, therefore, direct.

The yard expenses, the same.

382 Train enginemen I take as 90 per cent direct, as calculated for the train service of the road.

Fuel for train locomotives isn't as much affected by branch train service as the enginemen.

I find that the records of the company for freight train performance show that the amount of fuel used on branch line trains is about 25 per cent more per thousand gross ton miles than on the main line,

and that excess is equivalent to about two per cent of the entire train fuel account, and I therefore make that account 98 per cent direct.

Engine-house expense—train and trainmen, are made 90 per cent direct, for the same reasons as for train and enginemen. (737.)

Train supplies and expenses I consider entirely direct.

Signal crossings and drawbridge operations, entirely indirect, not affected by traffic. (738.)

Certain other accounts here, like telephone and telegraph lines, direct operation; stationery and printing, insurance, injuries, on the basis of the average of all other accounts under transportation.

Clearing wrecks, damage to property, damage to livestock, loss, and damage, in exact proportion to the traffic, or one hundred per cent direct.

Joint yards and terminals I apportion on the basis of the average of accounts 373, station employees, and 376, station supplies and expenses, and 377–89, yard expenses. Superintendent and joint tracks and facilities I apportion on the basis of the average of all accounts under the same.

383 The last general subdivision of transportation expenses is numbered 4 on page 15, the next subdivision, entitled general expenses, on page 17, is numbered 8. It ought to be No. 7. Five is expenses of water transportation, which have nothing to do with anything we are considering here; and 6 contains certain miscellaneous expenses, chiefly passenger service, such as maintenance of dining cars, and accounts of that kind. So I left those out entirely. (739.) Now, if you will turn over to Table 1 on pages 26 to 29, and consider only the first half, that is, on pages 26 and 28, you will find there where these percentages have been applied to each of these groups of account, and the result is applied to the entire freight expenses indicated.

The passenger and freight expenses in the first two columns are taken from the annual report.

I deal here only with the freight expenses, and they are divided according to my analysis in the two succeeding columns, the percentages, the resulting amounts of money being indicated there. They show that maintenance of way, practically fifty per cent direct, maintenance of equipment put down at one hundred, transportation, rail line I find to be 94 per cent direct, and the average of all expenses 84 per cent, direct, 16 per cent indirect.

Having now the direct freight expenses, those which are affected proportionally to the traffic, so that we might expect that this analysis is accurate, that ten per cent greater traffic would have shown ten per cent larger amount of direct cost, I want to

384 divide those so they can be split up among the units of operations for the purpose of enabling me to allocate these costs to particular districts, which vary in grades and curvature and conditions, sometimes, under which (740) they are operated. For the purpose of doing that, I divide this direct cost first into two

classes, the terminal cost, which has to do entirely with the origination and delivery of traffic; without any regard to the distance which—I am testifying now with respect to page eighteen of my study, and that again is divided into two classes, carload and less than carload.

Less than carload, so far as moved in cars, is considered as a part of the carload, the less than carload figures being intended to cover only expenses apart from the movement of the stuff and the handling of the freight in carloads.

And then there is the road cost, or the expense of moving freight between the points of origination and delivery. That is made up of two factors: First, distance factors, which depend upon the distance that the freight is moved, that is, on mileage; and resistance, or costs which depend upon the resistance that is to be overcome on account of friction and grades.

The unit for terminal carload operations is taken as the terminal handling required for delivery of a car to a consignee.

The unit of less than carload operations, the terminal handling of a net ton. (741.)

385 Distance factors are divided—the distance factor is divided into three units, the train-mile, the car-mile, and the gross ton-mile; and the unit of resistance is the resistance equivalent to that of lifting one ton one foot, or of one foot-ton.

Now, what I do here is to proceed to divide these freight expenses into classes in accordance with those which vary according to these different units. I then find the total number of those unit operations, total number of ton-miles, car-miles, and so forth, in the entire operations of the company for the year, and divide each cost by the number of units, and obtain a unit cost; then for specific movements of freight I find the required number of train-miles, car-miles, foot-tons of resistance to be overcome, gross ton-miles handled, and apply the unit costs thus found to that movement.

Taking up the maintenance of way first, and dealing from this on only with the direct cost as indicated in Table 1, leaving the indirect cost out of any further consideration for the present, I take my track accounts and consider that main tracks and passing tracks are used for train movements, so that their maintenance is entirely a road expense, while commercial and industrial car tracks are used only for terminal purposes, but yard tracks are used both for (742) origination of freight and for the assembling of cars in trains, which is terminal; and for operations connected with the movement of trains from one division to another, which is a road expense.

From comparison of the yard expenses on the first division which has a large amount of origination and a comparatively
386 small amount of through movement, with those on the second division, where the expenses are chiefly for through movement, I estimate that these expenses for the lines in the State should be apportioned sixty per cent to terminal carload, and forty per cent

to distance car-mile, and I divide my yard maintenance expenses in that proportion.

I have mentioned the first division and the second division. I will explain what they are on the Oregon-Washington Railroad & Navigation Company in Oregon. The first division in Oregon extends from Portland to Umatilla, along the Columbia River. It includes all the Portland yards and terminals here, and the comparatively level, or very nearly level, track from Portland to Umatilla.

The second division extends from Umatilla, and also by another line from Messner, on the main line, across to Huntington, takes in all the mountainous parts of the Oregon-Washington Railroad & Navigation Company. (743.)

As to why I used the Oregon-Washington Railroad & Navigation Company for the basis of this study as compared with the Short Line, or Southern Pacific, would say that in the first place, I had made a study of the Oregon-Washington Railroad & Navigation Company for a previous case of the original Columbia River differential case, and a further reason for that was that I was familiar with that road from having worked upon it for a long time, so that I knew its physical conditions much better than I did that of any other road and the effect of those upon operating conditions. Then as a matter of study from a scientific standpoint it was easier
387 for me to work on that road for these reasons than it would be upon a foreign road, one with which I was not acquainted.

In this study, however, I follow a similar study of the Short Line, and the O. W. actual conditions are under consideration here in some part, and those of the Short Line very much and of the Southern Pacific I make some comparisons which I think justify the extension of the unit of costs found on the other roads to operations on that road. This is a substitute for a similar study made there. Lack of time, for one thing, to cover the entire ground prevented me from making that kind of a study as regards the Southern Pacific. (744.)

I show next in my report, on pages 18 and 19, the classification of the main and branch lines of the Oregon-Washington Railroad & Navigation Company in Oregon, and further classified them as to main tracks, passing tracks, yard tracks, commercial tracks and industrial tracks.

I will go on with roadway maintenance. The small proportion of roadway maintenance that I have considered as direct I have apportioned on the average of all track accounts under maintenance of way.

On bridges, trestles, and culverts, so small a proportion of that account would apply to any yard tracks or sidings that I have calculated it entirely and considered it as altogether a road expense, and for that portion of it which is affected by traffic I divide on the basis of the equivalent ton mileage from the Oregon lines attributable to freight movement.

That was shown back here on page twelve, and considering
388 only the gross ton miles and the freight locomotive ton miles I find that twenty-three per cent of this was made up of locomotive movement and seventy-seven per cent of freight car movement. Now, it is the freight cars which provide the gross ton miles, so I take seventy-seven per cent of that (745) account as the gross ton-mile account, and the locomotives are used on account of resistance to movement, and I have therefore put the remaining twenty-three per cent in as a resistance cost.

Under ties, my purpose is to find out what proportion of the direct tie maintenance would be found on main and passing tracks, and what proportion on yard and commercial tracks. I have weighted these in accordance with some opinions of the American Railway Engineering Association to the effect that—I see that in my type in the text there is an error, including main tracks in the first statement. The statement ought to read, "The maintenance of ties for sidings," is considered as one-half that of main tracks. I would like to eliminate the words "main tracks and" in the first line of that paragraph under 212. I haven't had time to proofread this. It was just received from the printer. And I myself estimate the passing tracks would lie between those ratios, making it three-fourths as muc .

Now, this other was a mere mathematical calculation, and I presume it is hardly worth while to stop to go over it, but from the result of that I find that the direct maintenance of ties amounts—is equivalent in mileage to twenty-four per cent of the total amount of 1,137, and it is there that I obtain my twenty-four per cent direct.

389 Now, then, considering that the maintenance of yard (746) tracks is all terminal—is sixty per cent terminal and forty per cent car mile, and that all the maintenance on the commercial tracks is a terminal expense, and that the remaining sixty per cent is to be divided between resistance and gross ton-mile in proportion to equivalent ton mileage, as was done with bridges and culverts, I get finally a figure of thirteen per cent terminal, carload, eight per cent car-mile, forty-six per cent gross ton-mile, and fourteen per cent resistance as the division of the direct tie maintenance expense.

When I say as the division I mean as the division between the different unit costs that I have employed in this study, between the different units of operation.

On rails, rail maintenance, the American Railway Engineering Association estimates that yard tracks and commercial tracks require only a fourth as much as main tracks, and I introduce also the figure of half as much for passing tracks, and proceed with a similar weighting and division based on the same reasoning as in the preceding cases, which gives me terminal, carload expense of four per cent, car-mile one per cent, resistance twenty-two, and gross-ton-mile seventy-three.

Other track material, divided similarly, and sufficiently (747) indicated, I think, in the text, without reading it.

Ballast, likewise.

Also for tracklaying and surfacing.

I will omit going over those, unless someone wishes that I should do it.

Maintenance of station and office buildings is divided the same as station employees, and I will leave that until I come to that account.

390 Roadway buildings. The average of all accounts under maintenance of way.

Water and fuel stations are divided according to fuel accounts, and the figures are set down here by which these percentages are worked out.

The maintenance of shops and engine houses I take on the basis of the allocation to unit operations of certain other accounts; that is, maintenance of equipment, of engine-house expense, both train and yard, and the figures are set down and the method of working them out indicated.

Telegraph and telephone lines I divide equally between train-mile and car-mile.

Signals and interlockers upon the basis of the equivalent ton-miles, and the accounts as indicated here are taken simply as the average of all accounts under maintenance of way.

Coming now to maintenance of equipment, I apportion the (748) locomotive repairs, freight, to resistance according to the freight train locomotive mileage, including mixed trains. That is set forth here, and it will be observed that the freight locomotive miles plus the mixed train locomotive miles are 65 per cent of the total of two and a half million. I therefore take 65 per cent of this account as applying to resistance, being a road mileage expense, and in proportion to the resistance which the locomotives must overcome. The others I divided between terminal and car-mile, as indicated here in the text.

Under freight-car repairs, these come from such a variety of causes, and I have found so much difference in the opinion of practical men on the subject that I have had to estimate
391 this to a considerable extent from my own judgment, and I estimate that on this road 15 per cent of the car repairs would be due to damages in switching in the yards, and I divide that up nine per cent terminal, and six per cent is due to the handling of through cars, and therefore a car-mile expense. Of the 85 per cent incurred in road handling I estimate 20 per cent due to damages in starting and stopping trains, and therefore a car-mile expense, and 45 per cent to resistance, because it occurs on grades and curvatures. The remaining 20 per cent is miscellaneous causes chargeable to car-mile, so that the net result dividing this account is terminal, carload, 9 per cent, car-mile 46 per cent, and

the (749) resistance 45; and the balance of the accounts under maintenance of equipment are apportioned simply according to the average of those already described.

Traffic: Everything under this head is terminal, and I have apportioned it 20 per cent to less than carload and 80 per cent to carload.

Then I come to transportation expenses:

Dispatching trains, entirely a train-mile expense.

Station employees: The greater part of these employees are engaged in terminal operations, but there are telegraph operators and men engaged in feeding and watering stock, and straightening and reloading shipments, and doing various work in connection with through business and accounting for it. I estimate those at ten per cent of the whole account, and divide them equally between train-mile and car-mile. Of the remaining 90 per cent, the greater part belongs to the l. c. l. business, so that I take 70 per cent to that
392 and 20 per cent to those expenses which have to do with carload.

Weighing, inspection, and demurrage is a small account. I estimate it 25 per cent less than carload, and 75 per cent carload, all terminal.

Station supplies and expenses I divide the same as station employees. (750.)

Yard expenses, for reasons already described on page 18, are divided 60 per cent to terminal expenses by the carload and 40 per cent car mile expenses.

The train enginemen is an account requiring considerable analysis to determine to what extent it is proportional to train mileage and how far it is affected by other causes. Primarily it varies according to train mileage, but it is affected by resistance, so far as grades require the use of assistant engines or require the use of heavier engines whose crews are paid higher wages or have the effect of reducing speed so that men are paid on time instead of mileage. The figures shown here for the three divisions of main line freight train performance indicate the effect of these factors combined.

Division 3 extends from Umatilla and Pendleton to points on the main line northward and eastward throughout eastern Washington. In general, it is a line of moderate grades, somewhat heavier than the grades of the first division, not nearly so heavy on the average as those of the second division. I will point out, without reading all of these figures, enough to indicate the comparison that I wish to make between the divisions. The first group there merely points out physical characteristics (751) and facts regarding speed,
393 train loading, and so on. The grades are indicated under the head of equivalent rise per mile in feet.

I had better say right here that equivalent rise is a factor made up of the effects of friction as expressed in grade and the actual grades and the characteristics of the three divisions in that respect

are shown by these figures which apply only to the main line, do not include the branches. The first division has an average in both directions of 17.2 feet, the second division of 30.7, and the third 18.2 feet.

Now in the second tabulation at the bottom of page 22 it is shown that the expenses of enginemen are 23.75 cents a train mile on the first division, 50.25 on the second, and 32.28 on the third.

The controlling factor in those variations is attributable to the effect of grades on resistance. There may be some other factors entering into it in a small degree which I am unable to detect or measure.

It is my assumption here for the purpose of this discussion that they are entirely due to the heavier grades of the second division. You will note that the first and third have almost exactly the same figures, although it is true that the third, with slightly greater resistance, has a very slightly less (752) expense per train mile, showing that there are some factors affecting it slightly other than grades.

Now from these comparisons I have worked out estimates of the effect of grades in increasing the cost of enginemen, and by the amount that I find that that cost exceeds what it would be on a straight mileage basis, on moderate or level grades, I attribute
394 that proportion of this expense of train enginemen to resistance, the remaining portion being considered as proportional to train mileage. Is it desirable that I go through those calculations here? They occupy a page here. And my net result is to estimate that 40 per cent of train enginemen expense on the Oregon lines made up mostly of second division and first division, is attributable to resistance, and 60 per cent is proportional to train mileage.

I think the figures can be readily followed by anyone who wishes to go through them. Now, of that 60 per cent which is not chargeable to resistance, a small proportion is due to other causes than train milage. I find from study of the compensation of trainmen that those who are on local and way freight trains make 76 per cent as many miles actually run per hour as those right through on the trains, and I would attribute this to the time spent at stations in handling freight and to the delays due to the inferior class of trains. This is terminal expense, and enginemen must have been affected in (753) the same degree as trainmen. From that calculation—from that consideration I apportion 9 per cent of the time of enginemen to terminal carload and 3 per cent to the handling of less than carload freight, and the remaining 48 per cent of train-mile expense, having already put 40 per cent to resistance, fuel for train locomotives, all due to the overcoming of resistance, except what is used in train switching. Now, the mileage of the latter was 5.3 per cent of the total freight locomotive mileage, but I estimate that the percentage of fuel would not be over three per cent, and I therefore apportion 3 per cent of it to terminal expense, and 97 per cent

to resistance; and water and lubricants and other supplies
395 apportioned the same as fuel; and also engine house expenses.

In trainmen that expense is not quite so definitely indicated as in the case of enginemen, but the effect of heavier grades on that expense is quite clearly indicated; that is, that there is such an effect. And in a manner similar to that which I have used for enginemen I work out calculations of the effect of grades in producing trainmen cost and assign 13 per cent of it to resistance.

That effect of grades on cost of trainmen is indicated by those figures of 32.2 cents for the first division, 43.77 cents per mile for the second division, and 36.31 cents for the third division. (754) As to how I divided among our different units of operation the direct cost for trainmen, in what percentages, I arrived at this figure after considering the difference in their compensation for local and way service: Terminal carload 7 per cent, less than carload 7 per cent, train-mile 73, and resistance 13 per cent. It will be found that this division of direct terminal and road cost between our different units of operation will, if the respective percentages are added up for every particular account, in every instance amount to 100. The entire amount is kept continually in sight. The effect of error of judgment in these apportionments would result in some one unit, perhaps one unit cost being found a little larger than it ought to be, and some other one or all others slightly less, and in the application of those to specific movements of freight it would result in perhaps a movement, let us say, on heavy grades being found to be slightly less than it ought to be, and correspond-
396 ing movements on light grades therefore being a little more than they ought to be, or the reverse. But in all cases all of the units to which the costs are applied would appear in varying amounts. Under my method certain elements of cost (755) would not disappear. They might not be accurately distributed in their proper places. But they are all there somewhere in one of the percentages.

I am down to train supplies and expenses, 402. I estimate 15 per cent of that account is terminal, 10 per cent train-mile, and the balance a car-mile expense. In clearing up the wrecks, accidents that were due to defective grades, would be proportional to car mileage, and those due to defective tracks directly to car mileage, go to a greater extent to train-mile, and those due to external cost would be proportional to the train-mile. I estimate out of that combination 60 per cent might be attributed to train-mile and 40 per cent to car-mile expenses.

Damage to livestock would be a train-mile expense. Damage to freight would be partly terminal and partly car-mile, and partly train-mile. I have put it this way here: 40 per cent less than carload, 10 per cent carload, 30 per cent train-mile and 20 per cent car-mile expense.

Joint yards and terminals are divided the same as the total of accounts 373, which is station employes, and 376 to 389, which are yard expenses. Then there is a group of expenses, of accounts here mostly small, which are divided according to all other accounts under the head of transportation. (756.) Then general expenses finally are apportioned the same as the total of all other expenses.

All of these apportionments and allocations are combined
397 in Table 1. On page 26 and through page 29, those four pages constitute my Table 1. The figures shown in the first columns headed passenger and freight, on page 26, are taken from the annual report of the company to the Public Service Commission of Oregon. That is true also of the first two columns of figures on page 28. On page 26 there are four columns of figures under the caption freight, and then there are subcolumns per cent, direct, per cent, indirect. The figures in those four columns computations were made by me. The method I followed in obtaining these percentages of direct and indirect expense have already been covered in my explanation. On page 27 I have similarly made computations to (757) derive all the figures shown on that page. The same is correct as to page 29. I did not make the computations on page 26, showing the separation between passenger and freight in the first two columns. That was done by the carrier.

On page 27 I have undertaken a further subanalysis of the direct freight cost figure shown on page 26. On the first line I have computed that of the O.-W. R. & N.'s operating expenses for 1925 $89,100 was attributable to superintendence of maintenance of way and structures as a direct expense. On page 27, on the first line of figures I have segregated or further analyzed this figure of $89,100 as a direct freight expense into six different elements. (758.) One, the terminal less than carload expense; the second, the terminal carload expense; the third, train-mile; the fourth, car-mile; the fifth, gross ton-mile, and the sixth, resistance. If those six figures

on that top line on page 27 are added it will produce $89,100.
398 I have not estimated here in my cost study any further analysis or separation of the figure of $89,000 on page 26, the top line for indirect freight expense. The six subcaptions on page 27, that is terminal less carload, terminal carload, train-mile, car-mile, gross ton-mile and resistance, are the six units of operation for which I have determined average costs in this study. They are average direct costs. The other figures for the other accounts shown on pages 26 and 28 are computed in exactly the same way as I have explained for the first line. (759.) I think Table 1 is fully covered. I have shown here indirect freight cost. Previously my cost study here does not undertake to go any further than to ascertain the direct cost. That is all I am dealing with in comparing different routes one with another. When I have come finally to the earnings possible for the cross-State line I have to take into account indirect cost, as attributable to that. But up to this point,

and for the purpose of this Table 1, I have not attempted to further subdivide this indirect cost or to apportion it in any way. But my use or application of indirect cost will be developed and explained later on in my testimony. I have not seen the study as to whether the commission in making settlements under section 209 of the transportation act made a somewhat similar study and analysis of what I term direct and indirect expense here, or that they arrived at one-third direct expense, say, for the maintenance of way and (760) structures, and two-thirds indirect as against our 50 per cent. I would say this, however: That the percentage which is direct is itself variable with the volume of traffic of the carrier under consideration. It can't be dissociated from the volume
399 of traffic. And that comparison would not, therefore, be an intelligent one unless it took into account the volume of traffic of this carrier here and—was this for a group of roads that you speak of? You think it was for all class one roads. I don't know how that traffic would compare with the density here, but that would have to be taken into consideration. In Table 1 on page 26, for item 201 I have allocated 50 per cent of the freight cost as a direct expense and 50 per cent as indirect, adding 50 and 50 making 100. In other words, the direct and indirect cost that I have allocated will make up 100 per cent of the freight cost attributable to that particular account. It is true that for some of these accounts I have (761) found the indirect cost—take 206, for example, the indirect cost 100 per cent, and no direct cost. On the other hand, in some instances, like 214, I have found that the direct cost was 100 per cent and there was no indirect cost. In every account it will be found that the sum of the percentages in the two columns headed freight will add up 100. Those percentages in the respective columns are my own computations, and I take them on the basis of the explanation I have previously made.

Now taking up page 30. On page 30, there are certain portions of the investment in railroad property that increase approximately in proportion to the increase in traffic. The property items are equipment (762), and sidetracks, and buildings. The interest on those is, therefore, properly a part of the direct cost of service. I have calculated it at the rate of 5 per cent, and in the figures which follow these are statements of the manner in which I derive
400 my estimates of the investment in various items, locomotives, cars, sidetracks, and buildings of various kinds, to which these figures, this interest charge, is to be applied; and I think it would be unnecessary to spend any time in reading that.

The interest on investment in train locomotives I charge up to resistance; that on switching locomotives, divided the same as yard expenses, 60 per cent to the carload and 40 to the car-mile; interest on freight cars, I apportioned on an estimate of the time consumed in loading and unloading and called it 60 per cent carload and 40

per cent car-mile; miscellaneous equipment I apportioned on an estimate of other equipment. As to the figures on page 30, under the heading investment in equipment, steam locomotives to June 30th, 1914, $2,269,000, that was taken from the company's annual reports which I had used in my original cost studies, because they were in convenient form for me to use, and also because the annual reports used that date. (763.) I have added to the investment as of that date the investment since and shown in the third column the totals for those four classifications of investment. So that the totals in column three represent the figures as of 1925. Now going on with sidetracks, on page 31. Sidetracks I estimate on a mileage basis, so much per mile, and the interest on passing tracks I consider is a train-mile expense, and of the other tracks, yard tracks, 40 per cent to car-mile expense on account of the through movement of the cars and the balance to terminal carload.

Station and office buildings, I divide the interest on those in the same manner as station employes, 70 per cent to the less than
401 car-load, 20 per cent to the car load, 5 per cent to the train-mile and 5 per cent to car-mile.

Investment in shops and engine houses: Interest is apportioned in the same manner as to maintenance.

On fuel stations the interest is apportioned on the basis of consumption of fuel, 85 per cent to resistance on account of train fuel, and 15 per cent to yard work, which is divided 9 per cent to terminal and 6 per cent to the car-mile.

Water stations are similarly divided.

Then I have included also the hire of equipment, as found (764) in the company's annual report, and these figures are collected in Table 2, on page 33, where the first column gives the estimated investment, the next 5 per cent interest on it, and the remaining columns the allocation to the different groups of unit expenses. The figures on page 33, with the exception of those in the first column, are my own computations. And even those in the first column are partly my own computations as derived from the annual reports and with the application of percentages to bring them approximately to present-day costs.

In the columns under the caption "Direct freight," on the right-hand side of the page, I have shown again in this partial analysis of investment my terminal and road direct freight costs, and have subdivided the terminal into less than carload and carload, and the road costs into train-mile, car-mile, and resistance, again using all of my units of operation for that purpose, except the gross ton-mile.

These allocations of interest on investment, so far as the
402 percentages shown, make up for each item 100 per cent, when the different percentages on any one line are added together. In some instances, for example on the first line (765), 100 per cent of interest on investment, I have allocated to road cost and none

at all to terminal. In all the other instances on that page the interest is divided as between terminal, on the one hand, and road cost on the other.

Going to the next page. I come now to the collection of the statistics to determine the number of unit operations to which the preceding cost figures are applicable, and these have been gathered together in Table 3, on page 37, the first nine columns of which have been taken from the company's records, except that on certain districts which are cut off by the State line, such as from Umatilla to Ayer Junction, Pendleton to the State line—that is part of the district Pendleton to Grange City; on those I have had to make some estimates and apportionments in order to bring the totals into conformity with the totals of train-miles, locomotive-miles, and so forth, reported by the carrier to the public service commission as confined to operations within this State. Those are of minor importance, but with that exception these figures are all taken directly from the company's records in the first nine columns of Table 3.

Then for the distribution of car-miles by districts, as shown on columns 10 to 13 of Table 3, I get my freight-car (766) miles from another form used by the carriers, and again I have to make some apportionments on these main-line districts, and also because their figures do not apportion between different branch lines; and in
403 attempting, therefore, to ascertain how many train-miles and car-miles are to be found on a branch line I have to make apportionments. And those apportionments are explained in the text here on page 34, under the head of "Distribution of car-miles by districts." They simply contain allocations which are made on basis which are explained here, and I think it would be unnecessary to go into them.

The loaded-car miles for a district were obtained by dividing the net ton-miles on each district by the average loading of loaded cars on the division as given by the company in Form 522, and then making some small adjustments to make the total equal to the total given for the State in the annual report. Empty-car miles I get by taking the loads from the totals.

Table 4 contains the calculations for resistance, first, westbound on page 38, and eastbound on page 39.

The resistance here includes that of the locomotive and tender as well as the cars.

Here also I had to do some apportioning, the records of the company showing totals for branch lines of a division but not the amounts for each division. That is particularly in locomotive ton-miles. For example, for the second division (767), which is complete in Oregon, the number of locomotive ton-miles is given for the main line, made up of four districts, and another total is given for the branch lines, made up of two branches, and it was necessary for me to apportion those totals between the different districts. That

has been done in general on the basis of locomotive mileage;
404 but that is not true of the main line of the second division, where on account of the mountain grades there is much heavier engine service between Rieth and La Grande than there is between La Grande and Huntington, and I apportioned the locomotive ton-miles in those districts by taking the number of gross ton-miles hauled over the districts, taking into account the resistance overcome in that haul and making my apportionment so that the number of locomotive-miles would correspond to the product of gross ton-miles multiplied by equivalent rise on the district; that is taking into account in that manner difference of grades. By locomotive-miles I mean locomotive and tender. I didn't count caboose in here at all in this total. Non-revenue freight I apportioned finally, after getting all of my—well, first, in this particular case these figures (768) would include non-revenue freight. Yes; they would be included in this tonnage.

On page 38, column 7, I have figures under caption "Average weight of car." I haven't gotten to that yet.

Gross-ton miles in column 4 in Table 4 are the same as those shown in Table 3, where they have been taken from the company's reports. And in column 5 I take the total of the gross ton-miles and the locomotive ton-miles for each district. Then having that figure I divide it by the mileage and obtain a figure in the sixth column which is the average tons moving over the entire district, it would product with the same number of ton-miles that are shown in columns 3 and 4, if the movement were over the entire district. I have found from study in previous case that if I took the tons added to or subtracted from the freight movement at each station on a district and worked out my ton-miles and the resistance over-
405 come over the district by that more exact method, that I got so near exactly the same figure that I got by simply taking this average figure of tons and assuming that it moved the entire length of the district, that I considered it entirely unnecessary to go to the greater refinement of figuring the tons in and out of each station and over the corresponding portion of the district. It is true there might be instances (769) in which that would make a difference, but as far as anything that we have to consider here is concerned I am confident it would not make any difference at all.

The average weight of the cars is found by dividing the gross ton-miles by the total car-miles of each district, as shown in Table 3. The reason that I want that figure is that experiments have shown that the frictional resistance on level track varies considerably with the weight of the car. It is more per ton for a light car than it is for a heavy car, and therefore I would have to take into account, in determining the total amount of resistance overcome as measured in foot tons, I have to take into account the average weight of cars on different districts. Light movement, empty movement is all in-

cluded in this tonnage, this gross tonnage. In column 7, the average weight of the car is loaded and unloaded cars—all cars. I arrived at that simply by taking this gross-ton-mile figure in column 4 and dividing it by the number of car-miles, loaded and unloaded. (770.) The gross-ton-mile figure would include both the loaded and empty movement. The empty car has a greater resistance per ton of its weight than the loaded car. And these gross-ton-mile figures include the loaded as well as the unloaded cars. Column 8
406 contains figures which are calculated from the profiles of the railroad of friction and curvature, and they are calculated for a 38-ton car which had a speed of 23 miles, which Schmitt's experiments show to have a resistance of 6 pounds per ton, equivalent to a grade of three-tenths per cent. My original calculations, which occupied quite a number of months of labor, applied to the different carriers in this country, were all based upon that particular figure, and therefore for this use here I have used those figures as a base and simply calculated by percentages what would be applicable to cars of other weight, and that is the reason for obtaining this figure of average weight of car, in order that by means of these experiments I might determine what factor would be applicable there. A 38-ton car, as shown by those calculations, would, for example, from The Dalles to Umatilla, have had to overcome a frictional resistance equivalent to lifting it 1,631 feet. That is shown on Table 4, page 38.

Well, I did not use a good illustration. The actual (771) weight of the car there was 38.4 tons, being so near that the difference for the actual car shown in column 9 is very nearly the same thing, 1,620. In other cases the difference is greater. For example, there is the Joseph branch with an average weight of car of 52.6 tons, so that the friction and curvature which would be correct for a 38-ton car are reduced from 623 to 487 feet for the actual car.

Those percentages are applied all the way through to the figures in column 8, so that those figures in column 9 are the corrections applicable for the particular weights of cars that actually moved over the different districts.

407 Then the next ascents are shown in column 10. Those are obtained in this way: If there is an actual rise, it appears in its full amount; if there is a falling grade more than sufficient to overcome all the frictional resistance, so that no power has to be exerted at all, I put in for that particular part of the movement nothing whatever, neither grade resistance nor curvature, frictional resistance. The descending grade overcomes all of it. If there are grades, descending grades so light that friction is greater than the descent, the descent not sufficient to overcome the friction, then the friction itself is included in my calculation and the amount of the descending grade is put in as a subtractive factor.

The remainder is what is shown in column 10 as the net ascents. (772.) It is actual ascents less those descents which are under a

three-tenths per cent grade, and for which districts, or for which parts of the road fractional resistance has been included in the calculation.

Column 11 is the sum of columns 9 and 10. That is the total equivalent rise for the district in question for cars of the weight which actually moved over it. Then finally this total equivalent rise in column 11 is multiplied by this average number of tons of column 6, giving me the foot-tons which are shown in column 12, the obtaining of that being the purpose of this table.

As to the significance of the figure, the upper right-hand corner of page 38, total of 28,375,000 foot-tons in comparison with the total at the upper right-hand corner of page 39 of 44,479,000 foot-tons, the first on page 38 is the total number of thousands of foot-
408 tons of resistance overcome in the moving of freight west-bound on the O.-W. R. & N. lines in Oregon in 1927. The other, of 44,000,000, is the corresponding figure for eastbound movement. The difference in those two totals is due to the fact that greater part of the freight of this carrier moves east, and that in general on its lines eastbound grades are heavier than westbound grades. (773.) That completes explanation I had to make of Table 4.

I come now to the finding of unit costs themselves, having obtained the figures for the total costs and the total number of units. I did not make any attempt to get it for l. c. l., because we are not interested here, and it would be a very great amount of labor to find the number of tons to which the total cost figures would be applicable. There is a good deal of difficulty in regard to terminal. The figures obtainable did not in some cases cover the entire year, giving me only six months. They do not give the figures in the form in which I want. What I want to get for the purpose of application of these costs is the number of cars delivered to consignees, the number of cars originated, the number of cars interchanged, and the number of l. c. l. cars orginated, and of similar cars delivered.

There are two pages here, 40 and 41, which explain the manner in which I have made estimates of the numbers of these operations, and from them I get the figures which are shown at the top of page 42 as the total number of units. Under that you will observe that I have as delivered to consignees 52,090, and then, not in the column but in the figures preceding it, cars originated 71,058, cars inter-
409 changed 43,393 (744), l. c. l. cars originated 26,470, and l. c. l. cars delivered 19,400.

Now it is my own estimate that the terminal cost of delivering a car to a consignee is less than that of originating a car, and I take the delivery as my unit of terminal operation, and I estimate that the cost of origination is one-fourth greater, that is one and one-fourth units of interchange with the connecting line as equivalent to half that of a delivery, and the origination and delivery of l. c. l. cars each

as one-half, and I leave out the empty cars, considering the movement of the empty car to the shipper, or from a consignee, as part of the above units, and that all the handling of empty cars is part of those miscellaneous movements which can not be attributed to any specific shipments. Therefore I weight the figures which I have just read a moment ago by these proportions of one and a quarter and of one-half, obtain from that an estimated number of unit operations, that is the equivalent of 185,544 cars delivered to consignees. In figuring the cost, that figure of 185,544 is to be set up against the total of operating expenses attributed to the terminal carload, as shown on page 29, $1,575,896, plus a similar total on page 33 of an interest charge of $494,800, but it first needs some correction, because there are switching operations in the large yards which are paid for separately, and in order to eliminate those from this consideration I
(775) make some estimates as to their amount in cost.
410 Switching revenues for the O.-W. in 1925 were $445,000, and I estimated from what data I could get that 58 per cent of those were handled at Portland, so I took 58 per cent of those switching revenues, $258,000, and attributed those to operations at Portland.

The direct cost of earning this amount I took at 75 per cent of the operations, because 75 per cent is just about, I think, the operating ratio of the company for all its operations. I have no other guide as to what that cost would be, and I therefore took off from my cost this $194,000 leaving me for operating expenses as the cost of this unit of movements $1,381,896. That divided by 185,544 unit operations would give me a cost per unit of $7.45.

Similarly dividing the interest charge of $494,800 by the same divisor, I would have $2.67 per unit, making a total of $10.12 for the average cost of a car delivered. Then using my ratio of one and one-quarter I would have for cars originating $12.65, and for cars interchanged one-half of the delivery, or $5.06.

Now, in the larger cities the cost would run higher than at the small stations, and this has to be taken into account in calculating the cost of any specific movement.

This analysis is not as good as I wish it was; it is the best I can make under the circumstances. I think that the (776) estimate of cost is reasonably accurate, but it would be an immense amount of labor to determine, except in this approximate fashion, how many terminal handlings there were actually performed by the carrier,
and I can only estimate the relative cost of the origination,
411 delivery, and transfer. I think it probable that the company could, if they desire, furnish somewhat more accurate estimates, perhaps very much more accurate estimates of the number of these handlings. I do not know whether they keep that or not; I was not able to find that they did have anything of that kind available that I could get. The important thing to keep in mind in connection with the conclusions I have reached as to the cost, the

terminal cost, the terminal unit cost that I have just been discussing, is that I ascertained it was $10.12 for a car delivered, $12.65 for a car originated, and $5.06 for a car interchanged. Those are the terminal cost units that I have used throughout this study.

My next cost item is the train-mile; the total number of main-line train-miles was 1,056,048. These are from the company's statements. And the 50 per cent direct percentage of the branch-line mileage would be 140,168, making a total of 1,196,216. The (777) cost of operating expenses shown in Table 1 was $721,825, or 60.3 cents per mile. The interest charge was $41,625, in Table 2, or 3.5 cents per mile, making a total direct cost per train-mile of 63.8 cents. The figure 63.8 cents is the train-mile cost unit that I am using in my cost study.

Number of car-miles was 63,778,000, and the operating expenses, from Table 1, $1,340,570, equal to 2.10 cents per mile. The interest charge was $311,725, or .49 of a cent per mile, making the total direct cost 2.59 cents.

The gross ton-miles—I have used that word because it is familiar as expressing the effect of weight, but when I come to this particular factor I use the weighted gross ton-mile, in which I double
412 the weight of cars and contents, or the weight of the locomotive, and added to the weight the cars and contents, giving me equivalent ton-miles, as they are called and explained on page 10. These amounted to 3,343,000,000 ton-miles, and the operating expense charged to them was $669,200, or 20 cents a thousand.

There is no interest charge to this account.

Resistance overcome, shown by Table 4, both east and west, was 72,854,000,000 foot-tons, and the operating expense ascribed to it $3,262,955, or 4.48 cents per thousand, while (778) the interest cost was $346,100, or .48 cent per thousand, making a total direct cost of 4.96 cents per thousand foot-tons.

For convenience of reference and of an understanding of the subject, I have assembled these elements of unit costs in the table below and have shown what portion of each one of them arose out of the main classifications of operating expenses. There is nothing in that that has not either already been stated or can be found from the figures given in other tables.

If you take in Table 5 the sum of the various items under the heading "Terminal carload," the direct total cost is $10.12. That is the exact figure I gave as the total unit cost for a car delivered.

Adding in the next column the items under the caption "Train-mile," I get a total of 63.8 cents, and that corresponds to the figure I have just explained as our average total direct cost per trail-mile. And so all the way through, those figures on the last line in Table 5 indicate the items of expense opposite particular accounts that went to make up the total. It is useful to have those divided in
413 this fashion, because it enables one to determine at once what the effect (779) would be in a change in any one of the main

items; as, for example, if it were a question of the effect of the cost of train fuel, it is shown there in the last column as contributing 1.88 cents to a total of 4.96 cents, so that if the fuel, for example, were to become one-half as expensive you would be able to determine how much that would affect the total unit.

I arrive at 2 mills per gross ton-mile. Now if you observe, on Table 5 here, that is made up entirely of maintenance-of-way expense plus proportion of general expense. It in nowise represents any such figure as one often attempts to make of a cost of a railroad's operations based on its gross ton-miles. It is only in my analysis by my reasoning that proportion of the expense which varies in absolute accordance with the gross ton-miles. (780.) I count the locomotive weight as double in arriving at this figure. Ordinarily a locomotive and tender is about 15 per cent of the total gross ton-miles. (781.) As I recall, after doubling it becomes eighty-three per cent, the total. That is shown on page twelve, in the ratio of 783 million to 2,560 million. That, of course, is a figure applicable only to the O.-W. R. & N. The percentage of total operating expense applicable to terminal expense has been shown here as operating expense. That would be here in Table I—twenty-seven per cent, including l. c. l. I get that by adding the two percentages on page 29, 8 and 19. That completes my study and analysis so far as the Oregon-Washington Railroad & Navigation Company operations in 1925 are concerned. Now I proceed with a similar study and analysis for the (782) Oregon Short Line in 1925.

414 The traffic density on the Short Line is substantially the same as that of the Oregon-Washington Railroad & Navigation Company lines in Oregon, and I therefore use the same percentages of direct as for that road, except in certain accounts where the different percentages of tracks in main line and in your tracks, passing tracks, and so on, effect the calculations which I have previously made for the Oregon-Washington Railroad & Navigation Company.

That gives me, for example, for ties, working it out on the same percentages applied to each track, with the cost of the different mileages, I get that account to be twenty-two per cent direct, instead of twenty-four as I have on the Oregon-Washington Railroad & Navigation Company. That is the only percentage which I change in the maintenance of way.

On maintenance of equipment and traffic I took those throughout the same as the Oregon-Washington Railroad & Navigation Company.

On transportation there are some differences, due to a difference of branch-line mileage again in its proportions.

I note that the Oregon Short Line branches carry considerably less freight per train than those of the Oregon-Washington Railroad

& Navigation Company, resulting in greater (783) expenses per thousand gross ton-miles, and on that basis I have estimated their branch-line service of thirty-five per cent direct, instead of fifty per cent as on the Oregon-Washington Railroad & Navigation Company, and it gives me a figure of eighty-seven per cent as the direct factor, in place of the ninety per cent which I had on the Oregon-Washington Railroad & Navigation Company, and assigns this
415 percentage to certain accounts. That is for the entire train service.

Fuel cost on the branch lines was about two and one-half times as much per thousand gross ton-miles as on the main line, and the excess over main-line cost for consumption of fuel represented ten per cent of the entire account, and I have therefore estimated that account as ninety per cent direct. Those changes have caused some slight changes in those average accounts which are apportioned the same as the average of all other accounts under the same head, and those—the figures resulting from that are shown in Table VI, in which, as in the corresponding table of the Oregon-Washington Railroad & Navigation Company, the first columns, passenger and freight, are figures taken from the company's annual report, and the columns under freight headed "Direct" and "Indirect" are the results of my apportionments, all the (784) explanations being the same as were the Oregon-Washington Railroad & Navigation Company tables.

Then under the allocation of terminal and road to the various unit operations, practically the same explanation would apply all the way through, that the figures—the apportionments are the same, except as affected by slight differences in the proportions of equivalent ton mileage, gross ton-miles, as compared with locomotive ton-miles. In this case the locomotive ton-miles equivalent was twenty-two per cent, instead of twenty-three as with the Oregon-Washington Railroad & Navigation Company.

And other accounts, like ties and rails, are affected in a small degree by the different proportions of the different classes of traffic, but I think there is no necessity of my going over those figures, particularly as regards maintenance of way. Except where there are differences in results that I want to point out, the method that I have followed in my study and analysis for the Oregon Short Line is no different than that for the Oregon-Washington Railroad & Navigation Company. It is the same system of doing it.

I think that would apply to pretty near all of these analyses. It would be of interest, perhaps, to consider (785)— well, this one particularly I ought to point out, station employees. I am referring to page 48. Page 48, under station employees. There appears to be considerable less l. c. l. tonnage on the Short Line proportionately than on the Oregon-Washington Railroad & Navigation Company, and, therefore, I modify my apportionment of the station employees expense accordingly, reducing the amount that goes to l. c. l.

That applies, also, to the next account, weighing, inspection, and demurrage, and to station supplies and expenses.

On yard expenses I compared those costs of the yards one with another, and the number of through and local cars handled, and the cars originated, and the yard expenses, and so forth, and from that I estimated that 40 per cent of the yard expense of the Oregon Short Line were terminal and 60 per cent had to do with through movements.

My figures on the Oregon-Washington Railroad & Navigation Company for the State of Oregon were just the reverse of those; 60 per cent were terminal, and 40 per cent were through movements on the Oregon-Washington Railroad & Navigation Company.

417 Now, in the discussion of train enginemen I made a similar study there after that on the Oregon-Washington Railroad (786) & Navigation Company, noting the difference in cost of enginemen per train mile on the different divisions, with different grades, but there are some other factors that come in there that make that less certain than I can make it on the Oregon-Washington Railroad & Navigation Company because the Montana division, while it has heavier grades, seems to use lighter locomotives all through, pulling smaller trains, and the Idaho division, while it has more rise per mile and heavier trains, it runs at slower speed, and its cost was very little more than on the Montana division with heavier grades, so that the effects there are evidently confused somewhat by some of these other factors, and making such apportionment as I was able to do on that basis, and as explained in the text, I got a figure of 10.7 per cent as the effect of resistance on this account of train enginemen, and that agreed so closely with the figure obtained in that manner by taking the excess of locomotive mileage over train mileage of ten per cent that I thought it at least a good check, and used the figure of ten per cent.

Similarly, here, I find trainmen making less miles run per hour worked on the local and way freight than on the through trains, and attribute that extra time spent to the time at stations handling freight, and therefore apportion the small amount of the time of enginemen and trainmen expenses to cover the expenses at the way stations, giving me for train (787) enginemen terminal charge of ten per cent, l. c. l. four per cent, train miles seventy-six, resistance ten.

418 Fuel for train locomotives; I estimate that the same as on the Oregon-Washington Railroad & Navigation Company, ninety-seven per cent chargeable to resistance.

In consideration of the effect of grades on expense of trainmen it is evident—or because of grades being more nearly uniform on the divisions of the Oregon Short Line than they are on the Oregon-Washington Railroad & Navigation Company, I didn't find any very great difference in those accounts, but I conclude that three per cent of the cost of trainmen may be charged up to resistance, and that

their work is divided as indicated by the greater amount of time used on the local and way freight-train cars, the same as with enginemen, and I find therefore l. c. l. ten per cent, carload ten per cent, train-mile seventy-seven, and resistance three.

Train supplies and expense I have compared with the Oregon-Washington Railroad & Navigation Company, but have allowed a larger amount for cleaning cars, because of the greater proportion of shipments of stock, coal, ores, and so forth, cars requiring cleaning, so I have reduced the car-mile percentage to sixty per cent, allowing thirty per cent to car-mile expense, and ten per cent for train-mile. (788.)

And then the other accounts under that head are sufficiently indicated in the text.

Turing to Table VI, on pages 52 and following, the figures in the first two columns, headed "Passenger" and "Freight," on page 52 and on page 54, were taken from the company's annual report.
419 The other two columns on page 52 and on page 54, and the computations on page 53 and 55 were made by me. It is understood to be the fact that the annual reports of the carriers to the Oregon Commission are set up in the same way and the separations made on the same basis as to the Interstate Commerce Commission. There is no explanation needed in connection with Table VI. which I haven't made for the corresponding table for the Oregon-Washington Railroad & Navigation Company. It is made in the same fashion, and the arrangement is the same throughout. (789.)

I have no knowledge of the investment on the Oregon Short Line, and I have assumed that the interest—per unit operation would be the same as on the Oregon-Washington Railroad & Navigation Company and added in the same amount for interest.

In regard to the foot of page fifty-five, Tables VII and VIII, on pages 56–B and following, and 56–D and following, there is a little confusion in the arrangement of the pages. It came about in attempting to get these pages so that they might be printed in the manner they are, running on from one page to the other. These two pages ought really to precede what appears on page 56. It isn't of any particular consequence, except that it is confusing. The subject of unit operations and costs should come after the tables. The tables are made up precisely as has been explained in regard to tables —, that is, Table VII exactly (790), the same as Table III on page 37 to the Oregon-Washington Railroad & Navigation Company, and Table VIII in exactly the same way as Table IV. I think they require no special explanation.

Going ahead with those discussions on page 56 and following. Here again, I have attempted, as regards the terminal,
420 carload, to find how many cars were handled in each of these various operations, while I want to put them on the same basis as those of the Oregon-Washington Railroad & Navigation Company, and I compare them as indicated there by the percentage

which the known factors bear as shown by the reports, and use those percentages for the factors which I had to estimate on the Oregon-Washington Railroad & Navigation Company.

That is explained in the text, and by means of that I obtain the figures given in this little table not numbered as a table but shown under "Unit costs," "Cars delivered to consignee," and "L. c. l. delivered," to each of those applying the same factors as in the other case, and obtaining a total of 314,400 unit operations.

I make a similar deduction there for switching revenues, and reduce my operating expenses in Table VI for (791) terminal, which are shown on page 55 as $2,028,560.00, by the amount of $96,000.00, and then dividing by this number of units I get a unit cost on the Oregon Short Line of $6.15. I add the same interest charge of $2.67 as on the Oregon-Washington Railroad & Navigation Company, making a total of $8.82 for a car delivered. Adding one-fourth, I get $11.024 origination, and taking one-half I have $4.41 for interchange.

The number of train-miles, total of 3,453,000, and the cost in operating expenses, $1,742,000.00, giving 50.4 cents per train mile. Adding the same interest charge as on the Oregon-Washington Railroad & Navigation Company makes a total cost of 53.9 cents per train-mile.

421 Going now to page 57, the number of car-mile is there given, 156 million, operating expenses $3,037,000.00, making 1.95 cents per mile; adding the interest charge on the Oregon-Washington Railroad & Navigation Company of .49 cents makes 2.44 cents.

Total gross ton-miles, 6,256,000,000, plus twice the locomotive ton-miles, gives me a total of 7,997,000,000, weighted ton-miles. The cost in operating expenses $1,320,760.00, or 16½ cents per 1,000. (492.)

Total resistence 130,112,000,000 foot-tons, and the cost in operating expenses $5,452,738.00, 4.19 cents per 1,000. Adding interest at .48, makes a total of 4.67 cents.

Then in Table IX, I set up a table in which these unit costs and their make-ups throughout are compared for the two carriers.

Taking the bottom line of this table and comparing the five unit costs on the two systems, that is, the total direct costs for the five units on the two systems, for terminal carload I find for the Oregon-Washington Railroad & Navigation Company $10.12, and for the Oregon Short Line $8.82.

For train-mile I find, respectively, naming the Oregon-Washington Railroad & Navigation Company first each time, 63.8 cents and 53.9 cents.

For the car-mile, 2.59 and 2.44.

For the gross ton-mile, 20 cents a thousand and 16½ cents a thousand.

For resistance per 1,000-foot tons, 4.96 cents and 4.67 cents.

That shows that the totals in every instance show higher unit costs on the Oregon-Washington Railroad & Navigation Company than on the Oregon Short Line. (793.)

422 There is nothing further in connection with this table that I want to point out.

In the application of these units it is necessary to take into account that there are certain factors which add to cost and do not appear in the units themselves. The first one is the nonrevenue freight. Every railroad has to carry a large amount of freight for its own operations.

The Oregon-Washington Railroad & Navigation Company in 1925 had no new construction going on, so I consider that all of the cost of handling nonrevenue freight by that company in that year would be chargeable to the cost of revenue freight and passenger service. In order to determine how much of it ought to go to passenger, I consider this, that passenger fuel itself costs about twenty-five per cent of the total cost of fuel, and passenger revenues were just under twenty-five per cent of the entire operating revenue, and I concluded therefore that a fair apportionment would be seventy-five per cent of the nonrevenue freight to the revenue freight. And on ton-miles the nonrevenue freight on the lines in Oregon were 124,000,000, seventy-five per cent of which is 93,000,000. The ton-miles of revenue freight were 1,033,000,000. There were therefore .09 of a ton of nonrevenue freight whose cost has to be added to each ton (794) of revenue freight.

On the Short Line the passenger fuel and expense were in very nearly the same proportion, and there was only a small amount of transportation in connection with new work, so I took the same figure of seventy-five per cent.

The ton-miles of nonrevenue freight were 261,000,000, seventy-five per cent of which is 196,000,000. Revenue freight, two

423 billion, four hundred sixty-seven million (795)—I mean the ton-miles of revenue freight—2,467,000,000, so that there is .08 tons of nonrevenue freight to be charged to each ton of revenue freight on the Short Line.

The Southern Pacific lines in Oregon show a larger percentage than this, but they had a large amount of new construction going on at the same time, and therefore for Southern Pacific calculations I used the same ratio as the Oregon-Washington Railroad & Navigation Company, 9 per cent.

On the Central Pacific in Nevada the ratio was 7 per cent.

These percentages have been used in my calculations further on, as explained when we come to them.

Then there is the question of relation of empty-car movement to the loads. For each loaded-freight-car mile east on the main line in Oregon in 1925 there was .44 of an empty-car mile west, and for each loaded mile west .25 of an empty mile east.

On the east and west main lines of the Oregon Short Line there was .57 of an empty west for each load east.

A statement of the Oregon-Washington Railroad & Navigation Company shows that in 1925 there were 57 per cent as many empty cars moved west through Huntington as there were loads east.

In 1926 that ratio was 60 per cent, and for the first six months of 1927, 57 per cent. (796.)

The records of the Southern Pacific lines in Oregon show northbound, empty-car miles 13,186,000, and southbound, 1,920,000. That was for 1925; that is, 87.3 per cent of the empty movement was north.

Another report gives for the same division loaded-freight-car miles of 33,410,424, and empty 16,218,113.

424 These figures do not quite agree with the first report, but I assume that the ratio would hold and that 87 per cent of the 16,218,000 of empties, or 14,160,000, were northbound.

Then I get the figures which are shown here from that:

Northbound loaded-freight-car miles 10,654,000, and empty 14,160,000, while southbound, 22,756,000 loaded and 2,058,000 empty.

That is, for each thousand loads south there were 623 empties north.

Then a statement of loads and empties in and out of the State received from the Southern Pacific shows for the period—there has been some omission here; I guess I made a mistake there—the period from August, 1927, as I recall it was, for the balance of the year, 60 per cent as many empties north into Oregon as there were loads south out of the State, so that for the purposes of this calculation, which were applied particularly to lumber, and also applied to some other (797) commodities, I estimate that each car moving east must be charged up with 60 per cent of the cost of an empty moving west, in order to obtain the load. Putting it in another way, for each one thousand loads of lumber east six hundred empties would have to be brought in. The information relating to these empty-car miles and loaded-car miles and other information relating to the Southern Pacific Company was taken from their own reports and statements to the commission.

Taking up the next topic of my study, it is only on these two roads, the Oregon-Washington Railroad & Navigation Company and the Oregon Short Line, that I have made these detailed studies for the purpose of obtaining unit costs, and the extent

425 to which they agree with each other has been indicated.

I want to apply these unit costs to operations not only over the roads on which the calculations were made, but on some other roads in the same part of the country, and I therefore make the comparisons which appear here on page 61.

The principal items in which these western roads differ in their expenses are the maintenance of way, on account of topography and climatic conditions, and the trainmen, on (798) account of loss governing train crews, which require larger crews in the State of

Oregon than in the other States involved here, and fuel, because of the difference in price at the stores and in the freight charges, and on account of differences in grades, affecting the quantity used.

I have shown here the comparative expenses of these roads, of certain roads, covering freight expenses only, as shown by their annual reports, and taking the entire amount and not attempting to make any analysis for them to determine how much was direct and how much was indirect.

I don't know how to account for the difference in trainmen per train-mile on the Southern Pacific in Oregon as compared with the Oregon-Washington Railroad & Navigation Company in Oregon. I don't know just why there should be that larger amount there under the same, but there is a very marked difference there. There is also a substantial difference in fuel cost, but that—I take it to be due to the fact that they have a very much larger branch-line operation, very much larger proportion of branch-line mileage, in this State than of main line, than the other line. I presume that might also account for (799) trainmen per train-mile, on account of having to pay a greater amount of constructive mileage.

426 I presume that it is for some such reason as that, that the branch lines don't enable them to make one-hundred-mile runs, and they probably have to pay a good deal of constructive mileage. I know of no other reason that might affect it.

The Southern Pacific does not use the same kind of fuel as the Oregon-Washington Railroad & Navigation Company. They use oil to a greater extent. The Oregon-Washington Railroad & Navigation Company use coal predominatingly. They use both oil and coal.

The comparison between maintenance of way per mile of equivalent main track between the Oregon-Washington Railroad & Navigation Company and Southern Pacific shows the Oregon-Washington Railroad & Navigation Company as having a greater cost than the Southern Pacific or the Short Line or the Central Pacific in Nevada. Those three comparisons, I think, speak for themselves.

Train fuel on the Southern Pacific is more expensive than (800) on the Oregon-Washington Railroad & Navigation Company, much less though on the Oregon Short Line, and on the Central Pacific, but that cost cannot be considered on the basis of those figures alone. It has to be modified by consideration of the relative amounts of resistance to be overcome on the different roads, and for that purpose I compare their main lines only, not taking into account branch lines, and I find that on the main line of the Oregon-Washington Railroad & Navigation Company from Portland to Huntington there is an average resistance, the mean of both directions, of 25 feet to the mile, while on the Short Line from Huntington to Granger, leaving out the north and south lines, the average is 18.2

427 feet; and on the Southern Pacific main line in Oregon the mean is 25.9 feet; for the Central Pacific lines in Nevada, 18.1.

That is, the Oregon-Washington Railroad & Navigation Company and the Southern Pacific are very nearly the same, while the Oregon Short Line and the Central Pacific have considerable less grade, on the average.

Now, if these figures of train fuel were corrected to what they would be if there were an equal amount of resistance to be overcome on the Short line and the Central Pacific we would have the figures shown here, relative figures shown near the bottom of the page, Oregon-Washington Railroad & Navigation Company 53.9 cents, Southern Pacific 70.6, Short Line 36.8, and Central Pacific 37.3. (801.)

I take it that these differences are affected by the price and the efficiency, except that as regards the Southern Pacific there is probably that fact of an excessive proportion of branch-line mileage.

There are several districts here upon which I want to apply these unit costs, either directly as found or as modified according to the circumstance.

First, taking the cross-State line itself, and including the Crane branch from Crescent Lake to Ontario, that country is similar to the Oregon Short Line, except that its grades are somewhat better than those on the Oregon Short Line, on the average.

I consider, therefore, that the maintenance cost due to traffic should not be more than on the Oregon Short Line, and I put it at the same amount and used the same figure of 16½ cents per 1,000
428 gross ton-miles, and the requirements in regard to train crews will be the same as on the Oregon-Washington Railroad & Navigation Company, and the cost of trainmen, therefore, ought to be the same, and since the train-mile cost, as shown in my analysis in Table IX of the make-up of these unit costs, is practically the same as on the Short Line (802). I use the Oregon-Washington Railroad & Navigation Company cost unit of 63.8 cents.

The car-mile cost I take that the Oregon-Washington Railroad and Navigation Company rate of 2.59 cents. I think that that is a fair figure, and I use that also for the competing route via Klamath Falls, so that the question is really as to whether there should be any difference between those two, rather than as to the exact amount.

The cost of fuel I would expect to find intermediate between the Oregon-Washington Railroad & Navigation Company and the Oregon Short Line, and since that is the principal factor in resistance cost I take the mean of the two cost figures of the two carriers and put it at 4.82 cents per 1,000 gross ton-miles, and I therefore have my unit costs as modified and as shown at the end of this paragraph.

I use the same figure of 9 per cent of nonrevenue freight for those operations in Oregon as I have used for the Oregon-Washington Railroad & Navigation Company.

I haven't shown anywhere else in my report nonrevenue freight as one of the unit costs. That is rather a misnomer there, to call it a unit cost, but it has to come into account in these calculations in the

same manner as unit costs. It is convenient to include it with them here. (803.)

My study is predicated on this first item, Crescent Lake to Ontario, on the assumption that the existing mileage from
429 Ontario to Crane is comparable with the Short Line mileage—that is, the character of the traffic as far as these direct-cost units are concerned.

I have been over a pretty large part of the country covered by these various hauls I am going to discuss now, and have observed it from the standpoint of an engineer.

Now taking Eugene to Klamath Falls. This is Southern Pacific operation, and those operating conditions on the two carriers are near enough alike so that I think the difference in cost of fuel and trainmen must be attributed to the greater amount of branch-line mileage on the Southern Pacific, and I intend to deal here only with main-line operations as far as the Southern Pacific is concerned, and I therefore use for this purpose the same unit costs for train-mile, car-mile, and gross ton-mile as on the Oregon-Washington (804) Railroad & Navigation Company, and, on the other hand, the maintenance-of-way cost there is less than on the Oregon-Washington Railroad & Navigation Company, on the average, but I think again that is the same cause, and I don't believe it would be any less so far as affected by traffic on the main line which crosses the mountains. I therefore use it for this section, the same unit costs throughout as I found throughout for the Oregon-Washington Railroad & Navigation Company, with the exception of the terminal carload costs, which is high on the Oregon-Washington Railroad & Navigation Company on account of the Portland terminals.

There are no similar conditions at any point involved in this comparison on the Southern Pacific lines, so I used, instead of the Oregon-Washington Railroad & Navigation Company cost, the Oregon
430 Short Line unit cost, giving me for unit costs for this section of the Southern Pacific those figures which are shown at the bottom of the page. Again I use the same percentage of nonrevenue freight.

The next haul is from Klamath Falls to Sparks. Sparks is a division point on the Central Pacific about 30 miles west of Fernley, which is shown on the map. It is between Fernley and the State line. At the time that I made this up I didn't have (805) figures of the cost of the Southern Pacific operations in California, but I did have those of the Central Pacific in Nevada, and I used these for the Southern Pacific in California, except on maintenance of way, which I conclude is as extensive as that of the Oregon-Washington Railroad & Navigation Company lines in Oregon, and I therefore use the unit costs of the Oregon-Washington Railroad & Navigation Company for the gross ton-mile, but use for the other units the same as found further on here for the Central Pacific. That is shown in the next

paragraph here, Sparks to Ogden, and Klamath Falls to Ogden via Alturas. I take those at the rates that are indicated for the Central Pacific in Nevada.

The maintenance of way shown on page 61, to be the same per mile as that of the Oregon Short Line; consequently I used the rate for the gross ton-mile. The cost of trainmen is shown as 9 per cent higher by their annual report than on the Short Line, and the addition of 9 per cent to train-mile gives to the item of trainmen in the train-mile cost on page 58 for the Short Line would have the effect of adding 1.9 cents to the entire train-mile cost, and I consequently make that addition, adding 1.9 cents to 53.9, giving me 55.8 cents as the train-mile cost for these operations in Nevada. (806.)

431 Fuel, shown on page 61, to cost 1.4 per cent more, which adds .02 cents to the resistance cost, by making that addition to the fuel cost shown on Table IX, giving me for resistance cost per 1,000 foot-tons 4.69 cents, instead of the 4.67 found for the Short Line.

I use for that the 7 per cent ratio of non-revenue freight which I find to be the fact on the Central Pacific. The paragraph above, where I was referring to the unit costs for the haul from Klamath Falls to Sparks—I had in mind there the haul via Roseville.

From Ogden to Omaha and Huntington to Granger I use the Short Line costs.

On page 64 I take up the question of car and train loading.

I have taken for the load of fir lumber moving from the Willamette Valley east 35 tons, and with a tare weight 21 tons, making a gross of 56 tons; and for loads from the pine districts east of the Cascade Mountains 25½ tons in cars of the same weight. In taking these average loads of fir and pine lumber, I arrived at the figures of 35 and 25½ tons from (807) statements furnished by the Southern Pacific, which are explained—which are referred to later on, that the average loading of the fir lumber was about 35 tons. And the average loading of pine about 25½. These figures for fir and pine lumber loading include the average of all the kinds of cars used.

Carloads of other commodities eastbound were found to weigh about 20 tons net, and I have used 41 as gross.

Westbound loads, 17 tons, 38 tons gross.

The average number of cars per train on the Short Line main line was 46.3, but what I want to get here is the through

432 trains, and making some assumptions here as to the main-line train-miles—how many of them were way freights and what they would have—would have left me 56 cars east, which was the same figure I had used in the calculations on the Oregon-Washington Railroad & Navigation Company haul to Crane, and I think those assumptions are reasonable enough to permit me to make them here and to use that same number of 56 cars for the average

through train for these calculations, and I therefore in my calculations—I charge up 1/56 of the cost of each train (808) mile to each car of freight.

Now, I find from calculations made of locomotive ton-miles and gross ton-miles and the resistance on different districts that, taking those districts in the direction of the maximum loading—maximum movement, I mean, so that the trains would be fully loaded—there would be an average weight of locomotive and tender of 5.1 tons for each 1,000 gross tons for each foot of equivalent rise per mile. I use that therefore for calculation of the number of tons of locomotive to be attributed to each carload of freight. That is a mere rule of thumb, convenient for this particular purpose, this study here. It is defective for some purposes for which such a study as this might be used. It is defective in this respect, that it doesn't allocate to a particular section of the road having the steep grades all of the locomotive service that actually is confined to that particular section that has the helper service, but it simply treats it on the basis of distributing all locomotive mileage over the entire district. There is no calculation involved in this particular case where that makes any particular difference, where it might be easy to
433 use this, or attempt to use it, in some cases where it would make a difference, and some correction would have to be made for that purpose. When I come to use those in my calculations, this ratio as found here, I take the actual weight of the car, and for the purpose of figuring resistance I add to it (809) the number of gross tons found by this rule to be applicable as the weight of the locomotive, and then for the purpose of calculating the effect on the track I double that locomotive allowance, and in each case I add a proportionate share of the weight of the caboose, .03 of a ton, where it is 56 cars to the train.

I get this figure of 56 tons weight that I mention here on page 64 in the next to the last paragraph as 35 tons of fir lumber plus 21 tons, being the tare weight of the car. That is how I get that 56-ton weight. I add 21 tons to 25½ tons of pine lumber, as the average loading, and get the other figure of 46.5-ton cars. (810–811.)

Now referring to page 65 of my report. On that page I have a table showing the equivalent rise for a very considerable number of districts, in preparation for calculations which follow. I have already explained the manner of the calculation of the friction and curvature, and the application of percentages for different weights of cars.

In Table 10, beginning on page 65, I give the friction and curvature for various weights of cars over different districts. There are shown in successive columns the corresponding figures for cars of different weights, percentages applied to obtain those being indicated in the text at the top of the page. Cars of 56 tons, for example, offer 74 per cent as much frictional resistance as those of 38,

434 and cars of 46½ tons 66 per cent, and so on. That means, that is, as much frictional resistance per ton as those of 38 tons per car. (812.) Page 65 would be improved if in the first sentence "per ton" should be inserted after the word "resistance." The sentence should read, "Cars of 56 tons weight offer 74 per cent as much frictional resistance per ton." "Per ton" ought to be inserted there. And the same insertion should be made in the next two sentences as applying to the other weights that are mentioned there.

Forty-six and a half ton table is prepared for use in calculating certain empties which have about that weight, 21 tons for the empty car. And in the eastbound on the next page—well, there again I haven't read the proof on this since this came back, the words "eastbound" have been omitted from the top of the succeeding page, 66. The statement here, Eugene to Crescent Lake, and so on, indicates that they are eastbound, but it was intended to mark that so there could be no mistake about it.

Going back to page 65, the column headed "21 tons" refers to an empty car. That is the reason for its being inserted here (813); 38 tons, and 46½ tons, are cars that include the load as well as the tare weight. Let me add right here that for the purposes of calculation, for a 46½-ton, for example, that first figure of 4,968 feet must have added to it the figure in the last column of net ascents, 2,434 feet; likewise the 21-ton car of 8,500 must have the same addition made. That is because, in order to get what is called equivalent rise, you must take both the net ascents in feet and the equivalent rise in feet, due to friction and curvature, and add the two together.

On page 66 there they are the same thing for eastbound,
435 except that in all those four columns 38 tons, 56 tons, 46½ tons, and 41 tons—those represent both the tare weight and the load in the car.

Now going to page 67 in regard to the first calculation of direct cost of hauling fir lumber from Eugene to Ogden via Roseville. (814). Taking a car of fir lumber weighing 56 tons, the unit costs used between Eugene and Crescent Lake are those shown at the head of page 63 as applicable between Eugene and Klamath Falls, and considering now the load eastbound the distance is 96 miles. The equivalent rise is to be found on page 66 for a 56-ton car, 1,330 feet, plus the net ascents of 4,349, making a total of 5,679, which, being divided by 96 miles, gives the average equivalent rise per mile of 59 feet. The locomotive-miles, tons to be added, are therefore to be found by multiplying 59 by the weight of the car, 56, times that factor, which I find on the third line of .0051, as the ratio of locomotive-ton weight to the gross ton weight. That factor has been combined here for convenience in getting these to .286, which is the product of 56 times .0051. That makes 16.9 tons of locomotive, which weight is to be added to the weight of the car in calculating the resistance.

I first put down the train-mile, the 96 train-miles for the train at a cost of 63.8 cents each, and I attribute one fifty-sixth of that amount to this car, making $1.09; the car-miles at 2.59 cents, which, times 96, amount to $2.49. Now the gross ton-mile weight to be considered is made up of the weight of the car, 56 tons, three-tenths of a ton to cover the proportion of the caboose weight, and twice this 16.9 tons of locomotive. Altogether that makes 90.1 tons.

So my gross ton-miles for this consideration are 96 times 90.1
436 tons, and (815) the unit cost is .02 of a cent each, making $1.73 as representing the gross ton-mile cost of that haul.

The resistance is figured on the weight of the car plus the three-tenths ton caboose, plus the 16.9 tons locomotive, making 73.2 tons, which is multiplied by that 5,679 feet of equivalent rise for that district, and that again by .00496 cents of unit cost per foot-ton of resistance, giving me for resistance cost $20.61. Then to cover non-revenue freight I add 9 per cent of those four items, which is $2.33, making me a total for the load over that district of $28.25, which total of $28.25 reflects all the unit costs except terminal.

I think I had better go through some more of these because of different uses here. Now from Crescent Lake to Klamath Falls is a downhill line. It would take more locomotive weight to haul an empty car up that grade than would be required to haul this load down. As I consider that locomotive weights—locomotive travel, mileage, weights and all, must be the same in both directions, I take the locomotive weight that would be required for an empty (816) car, which is calculated in the same manner as this for the full car but going in the opposite direction, and I find that to be 3.4 tons, so I add 3.4 tons in this place, instead of 16.9 as on the preceding district. The other calculations are made in the same manner, and I get for that Klamath Falls $7.89.

Now when I come to Klamath Falls to Dunsmuir other factors are treated in the same fashion, but we come into this part of the line, noted as on page 63, from Klamath Falls to Sparks, where I
am using a different set of unit costs. Train-mile, for ex-
437 ample, is 55.8 cents instead of 63.8, while car-mile is 2.44 instead of 2.59, and the resistance is .00469; and the non-revenue freight addition is 7 per cent instead of 9 per cent. So that I find from Klamath Falls to Dunsmuir for the load $10.72.

From Dunsmuir to Roseville I am still using the same weight, the same unit cost as in the last one, but again I have to use the weight of empty car, because of it being a downhill run for the load.

Roseville to Sparks is also on these same unit costs, and in this case again we have the mountain grades calling for that very heavy weight of locomotive to be attached, and giving me for that 140 miles $36.69.

I go on with those over the different divisions. Beyond Sparks I get to those Central Pacific unit costs, and then I (817) have

again another set to be applied slightly different, the main difference being in the gross ton-mile cost. These calculations and different paragraphs down to the middle of page 68 all relate to a loaded movement. In the first line I have Eugene to Crescent Lake, load; Crescent Lake to Klamath Falls, load, and so on; and the last one relating to the loaded movement is Alazon to Ogden, load; then commencing along there the first lines of these paragraphs read Ogden to Alazon, empty; Alazon to Weso, empty; and on over to the middle of page 69, Crescent Lake to Eugene, empty. On pages 68 and 69 I have computed in a similar way the cost of moving an empty car from Ogden to Eugene over the same route. And that requires no explanation other than to call attention to this: That I use, as attached to the empty car, the same weight of locomotive that was used for the loaded car going in the opposite direction. My assumption is that the use of the locomotive for the loaded car compelled its return, and that that should be included in the cost of the empty in the other direction.

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In the summary on page 69, at the foot of the page, I simply add together these various detail calculations (818), taking their totals only. The first set of figures consists of the loads. The cost of the load haul from Eugene to Ogden is $147.39. Now the cost of the backhaul of the empty is $98.00, and I have previously explained I have estimated the proportion of that empty-car haul to be charged to the load east at 60 per cent, and I therefore take 60 per cent of $98.00, $58.80; then my cost of origination at Eugene was $11.00, estimated, to which I add the 9 per cent, the 9 per cent having been added to all the previous items already to cover nonrevenue freight. After that figure 11 there is a sign indicating that that is to be divided by 9 per cent. It should be a plus sign there. I think that is the only place that mistake has been made. Also in the line below both of those are plus signs.

On the interchange at Ogden I add 7 per cent in place of 9, because 7 per cent is the nonrevenue freight ratio on the Central Pacific. The cost of the haul of the load (819) from Eugene to Ogden is $147.39, the cost of the empty from Ogden to Eugene at 60 per cent of the total is $58.80, the terminal cost for the origin at Eugene $12.00, and the interchange between the Southern Pacific and Union Pacific at Ogden $4.71, and those four items make a total cost of $222.90 for the movement of the empty from Ogden to Eugene and the loaded movement from Eugene to Ogden. I have followed the same method in computing the cost of the loaded movement and the cost of the necessary empty-car movement for the haul from Ogden to Omaha of fir logs. That follows on the next two pages, the total cost on the Union Pacific, Ogden to Omaha, being shown at the bottom of page 71 as $149.50. That includes the delivery to a consignee at Omaha. The computations on pages 72, 73, 74, and down to the bottom of page 75 are similarly made for

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other hauls. I have shown similar computations for the hauls of pine lumber from Klamath Falls to various points; from Klamath Falls and other points of origin of pine timber, such as Medford and Bend. In these computations on fir lumber I have put the figure 56 tons. That includes the tare weight of the car. (820.) I figure that tare weight at 21 tons. At the bottom of page 73—that is the beginning of the computation covering the proposed cross-State line. It omits Eugene to Crescent Lake as being already calculated and being the same figure. It starts at Crescent Lake and goes to Crane. As between fir lumber and any other commodity there would be two or three variables except the loads of the loading. It would affect the gross ton-mile cost because of the inclusion of a less weight of locomotive, and it would affect the resistance cost for the same reason. At the foot of page 75 the calculation of the cost of pine lumber, Klamath Falls to Omaha via Alturas, my loading of 46½ tons includes 21 tons for tare weight of the car. The calculations from that point on through page 82 are already covered.

Now taking up page 83. (821.) There is a similar calculation to be made here, but under somewhat different conditions. I want to figure here what the difference would be on the cost of haul from Bend to Ontario by the existing O.-W. R. & N. route and by way of the Oregon Trunk as it now is to an intersection with
440 the cross-State line. Thence via the cross-State line to Crane, and by the existing route to Ontario. For the purpose of making the calculation on the Bend branch from Bend to Sherman I use 36 cars per train, that being the average train of 1925 on the Bend branch. And similarly in figuring from Bend to a junction with the cross-State line I use 36 cars per train. I assume in this that in figuring by the way of the Oregon Trunk there will be joint operation of the Bend branch by the O.-W., so that there will be no interchange between carriers required, so that no interchange between carriers, no two-line haul would be involved by a haul by way of Crane; that is, that the Union Pacific, if it built the cross-State line, would operate its trains out of Bend, the entire way to Ontario, via the junction. (822.) Comparing this first calculation with the results of the second calculation shown on page 85, at the foot of page 85, I get a cost from Bend to Ontario by way of Sherman of $104.24, and a cost from Bend to Ontario by way of Crane of $62.40. That makes a saving from Bend of $41.84 a car for the cross-State line as compared with the route via Sherman. The respective mileages to Ontario for these two routes are 475 miles by Sherman and 348 by Crane. That difference in distance would apply equally on shipments of lumber from Bend to all points east of Ontario.

The comparisons on pages 86 and 87, and on pages 88 and 89 are calculations on commodities other than lumber. These are calculations prepared in order to be used in (823) comparisons made further

on in the report. I think they are intelligible in the light of the explanations already made.

441 On page 90 I have shown the cost of moving fir lumber from Roseburg to Granger via Roseville, and also on page 91 from Roseburg to Granger via Crane, and from Roseburg to Granger via Roseville. The results of those comparisons I will refer to later. The same comparisons are made in regard to the cost of moving pine lumber from Medford to Granger via different gateways. I will compare the results of these comparisons later on in my study. The printer has omitted on page 91 to note that that was pine lumber, Roseburg via Roseville to Granger. The preceding calculations are on fir lumber, heavier loading. In the middle of page 91 this should read underneath that caption, "Roseburg via Roseville to Granger, pine lumber, 46½ tons." (824.)

On page 96 I have shown under caption "Westbound Commodities" cost of haul from Granger to Eugene via Roseville. I include in the word "commodities" an average of the commodities shown by the Southern Pacific statement to the Oregon Commission of tonnage moving westward, various commodities in 1926. It includes all carload revenue freight. I have shown there 38 tons gross in the caption. The tare weight of 21 tons per car is included in that 38 tons gross. The difference would be 17 tons; that is the average loading of all of these carloads of revenue freight westbound taking the nearest whole ton. Of all these carload revenue freight westbound these particular figures here that are before us are confined to the loads only. (825.) No computation of cost for empty-car haul was necessary because the preponderance of the freight movement was eastward, so that no empties would necessarily be hauled eastward in order to take these loads west. I have made a similar comparison of cost of this all carload revenue freight west-

442 bound between Granger and Eugene, or from Granger to Eugene via Alturas and via Crane, on pages 98 and 99. I put in calculations for all the routes possible. I will refer later to the results of those comparisons of cost. As to page 96 there would be no empty movement whose cost would have to be charged to these commodities. There would be actually empty movement in the same direction, and there would not be empty movement in the opposite direction in order to provide cars for these commodities, and I mean an empty car movement in the opposite direction.

In the calculations which I introduce I shall show a figure (826) for the westbound empty cars in considering the total of car movements of all the operations. But as regards these particular commodities it would not be proper to charge them with any part of the cost of hauling empties east in order to get the cars, because there will be plenty of loads going east to furnish the cars to come back with those loads, so many, in fact, that a considerable number of those cars would have to come back empty.

On page 102 there is simply collected together there the costs of empty hauls as it has been calculated elsewhere in connection with loaded-car movements. The total cost of moving an empty westbound from Granger to Eugene via Roseville is $108.13. If that empty moves from and to the same points via Alturas, the cost is $84.33; via Crane, the cross-State line, the cost is $66.90.

I have shown on the next page fir lumber to Utah. I use the same figures for the loaded and tare weight, 56 tons a car, for the purpose of this comparison and calculation. (827.) There is no explanation that I wish to make of this page 103.

443 Taking up page 104. This takes up the traffic already moving through Ogden to and from points on the Southern Pacific in Oregon. The Southern Pacific Company furnish the public service commission with a statement of the traffic of 1926 so moving, and for my own purposes here, for the purpose of calculating cost, I divided that into four districts: Klamath County, with an existing outlet via Roseville and proposed outlets via Alturas and by Crane; Jackson and Josephine Counties I considered as centered at Medford and having a present outlet by Roseville and possible routes via Klamath Falls and Alturas and via Klamath Falls and Crane. It might be more desirable for the perishable products of that section to go northward through Eugene, but that would be slightly more expensive than to haul via Klamath Falls and Crane, and therefore I didn't think it worth while to enter into any cost of calculations by that route. The third division is Douglas County, with its present outlet through Roseville and a potential through Eugene and thence via either Alturas or Crane. And then other counties all taken together, because they all lie around, or north or west of (828) Eugene, so that all their products would move through that point, their products moving through Eugene and thence eastward, either via Roseville, by Alturas or Crane. (829.)

A statement was later received from the Southern Pacific showing cars billed through Ogden from small independent roads in Oregon, and these were all forest products, and I have added them to the cars reported by the Southern Pacific from each county, but I haven't attempted to show them in my tabulations as separate, so these cars of products which appear in Table XI on page 105 include

444 some tonnage handled by the Southern Pacific but not originating on its line. This Table XI, on page 105, gives a statement of the tonnage that the Southern Pacific reported to the Public Service Commission of Oregon, and arranged in accordance with the manner that I have already indicated.

The weights, average weights of loads, are my own calculations. The railway company's statement was of cars and total tonnage. In other words, the figures in the first column of cars were those reported by the Southern Pacific, and in the second column the average weights I have calculated myself. I have made that cal-

culation. It is a purely arithmetical calculation. (830.) There is no element of judgment on my part in this showing of average weights. Referring to page 104, in the first, third, and fourth groups assuming that all traffic which the Southern Pacific moves out of those groups was the same as if it had been routed by the shipper and routed by these various routes, it actually did go, all of it, through Roseville. I assumed that the Southern Pacific operated the whole, operated the cross-State line, and the Short Line down to Granger and east, operated the Alturas route, and the Roseville route, that it moved the traffic, for the purpose of my comparison, by each of those three routes. I compared the costs—I intend to compare the costs of moving it via each of these three routes. Any of these products might have gone by any one of those routes. But I don't attempt to say that (831) is the way it would go. But I will undertake to show what the respective costs of all of this tonnage would be via each one of those three routes.

On page 105 in the column headed "Average weight" those figures refer to the loading in the car. They do not include
445 any of the tare weight. That is the average weight of the load. This traffic statement, or tonnage statement, is divided between eastbound and westbound movement. Forest products furnish the bulk of the tonnage eastbound. The total number of cars of forest products was 22,460. Lane County in western Oregon furnished the largest number (832) of cars of forest products, 5,632, almost exactly one-quarter of the total. Eugene is situated in Lane County. Klamath County furnished the next largest tonnage of the eastbound forest products, 4,684 cars. There is none of this east bound forest products tonnage that couldn't move east via the cross-State line cheaper than by any other route, either existing or projecting. That is what I propose to show a little farther on.

The total number of cars of all revenue freight that moved east, excluding forest products, was 3,532 cars of other commodities. The average weight per car of the loading in those cars of eastbound general commodities was twenty tons. The total number of cars eastbound in the same period between those points was 1,226. The average loading was 16.7 tons. In another place in my exhibit in previous calculations I have used the figure of 17 tons, instead of this figure of 16.7. (833.)

This last item of empty cars at the bottom of this table is simply a matter of loads east less loads west. There moved east in that period from Klamath County 4,684 loaded cars of forest products, 54 cars of other commodities, so that adding 4,684 and 54 I would get the total number of cars that moved east in that period from Klamath County. The westbound movement of empties in Klamath County I compute as the difference between the total loads east from Klamath and the total loads west to Klamath. That is
446 true for the various other counties and for the totals shown. There is nothing more to be said in explanation of this table.

(834.) I do not include anything for tonnage now moved through Portland from this same territory, such as a broccoli. This table here includes nothing but what actually moved in 1926 through Ogden. It wouldn't include any movement through Portland that might move on the cross-State line. That possibly is taken into account further in calculations following this, but this has only to do with what I have called existing traffic, because it did exist during 1926. Traffic to or from points in the Willamette Valley in western Oregon, from and to eastern territories, that is, east of Ogden, would not normally be routed through Portland. The statement of tonnage in Table XI is of traffic that moved through the Ogden gateway to or from points on the Southern Pacific lines in Oregon. Ogden is not on the Union Pacific main line from Portland to the Missouri River. It is south of that. (835.) I would suppose that normally any of the tonnage shown on Table XI, either eastbound or westbound, or a considerable quantity of it might have been routed through Portland if it had been satisfactory to the originating carrier to do it. But if it were routed through Portland, if it was westbound tonnage, or routed through Portland if it was eastbound tonnage, it wouldn't have gone through Ogden. It would have gone through Granger. That is the tonnage that has moved through the Ogden gateway. If that tonnage going east or coming west moved through the Ogden gateway, it wouldn't normally move through the Portland gateway on the west end of the haul. (836.) As to whether broccoli that now moves through Portland would move over the cross-State line if it was constructed, I show that later on, but here I am considering only this existing traffic.

447 Now page 106—that merely mentions the fact that the records of the Western Pine Manufacturers' Association show that in 1926 there were 3,410 cars of lumber went out of Bend through Huntington; there was a little freight received from the opposite direction, but I don't know how much of it came into Bend, so I simply left it out altogether and called it all an empty-car movement westbound to balance that 3,410 loads eastbound. The previous computation I made would indicate that $41.84 on each one of these 3,410 cars might have been saved if the cross-State line had been constructed and they had been routed via the cross-State junction, Crane and east (837), instead of via Huntington. That computation or figure of saving was based on computations appearing on page 85.

Turning to page 107, that is merely introducing Table XII, potential saving on the existing traffic, and in this I haven't assigned empty-car movement to any load separately—I mean to any load specifically, but I have taken the entire empty-car movement and calculated the cost of moving those empty cars westbound. Now, that takes in, then, to Table XII, on page 108, which is the potential saving by substituting the cross-State line for the existing line by way of Roseville and for the proposed line by way of Alturas. The first column gives the origin of the cars, and the next the commodity,

and then the number of cars involved, and then for this purpose here I have merely presented the cost of road haul to or from Granger, for the reason that all cost beyond that point is simply a common addition to every calculation, and it is therefore unnecessary to include it here. The total savings in cost would be made west
448 of Granger. Then in the last columns there is the saving in (838) direct cost compared with the existing route via Roseville, so much per car, and so much total as applied to the number of cars given. And the train for the proposed route via Alturas.

Taking the forest products, from Klamath County, this statement in Table XI shows 4,684 cars; on page eighty of my calculation it is shown that the load from Klamath Falls via Roseville to Ogden costs $103.33; on page 77 it is shown that the cost from Ogden to Granger was $18.93; therefore the cost from Klamath Falls to Granger via Roseville was $122.26.

Similarly the cost from Klamath Falls through Alturas to Ogden, shown on page 76 as $72.98, again the cost from Ogden to Granger, $18.93, gives me a total of $91.91.

From Klamath Falls via Crane, I calculate it first to Chemult, shown on page 78, $8.83, from Chemult to Granger $78.24, making a total via Crane of $87.07.

For a haul from Klamath Falls it is therefore shown that it is cheaper to haul it via Crane to the amount of $35.19 per car, amounting to $164,830.00 on the 4,684 cars so moved in 1926.

Similarly it is shown to be $4.84 cheaper than the haul would be through Alturas, making a total saving possible (839) of $22,670.00; that is, the cost per car of hauling from Klamath Falls via Crane is $4.84 less than the cost via the proposed route through Alturas. The other computations for the forest products from other counties are similarly made all the way through. On page 109 I have total forest products 22,460 cars, opposite some figures over in the last five colums. The figures in the last five columns have no
449 reference at all to this item off to the left, "Total forest products." That ought to have been dropped down a line to show that it referred to something different. Going back to Klamath County, these forest products—these savings are all based on the computations of cost I have made from Klamath Falls itself, the city. For the purpose of this analysis of savings via the cross-State line I am assuming the same cost from all points of origin in Klamath County. (840.)

I believe the great bulk of the production of that county does originate in Klamath Falls. If there were any south of that, it would move through Klamath Falls, and to go east either via Alturas or via Crane, so the comparison of difference in cost would remain the same. If there were any produced at points north of Klamath Falls, the difference in cost would be greater in favor of the cross-State line than is here indicated. As to whether lumber in substantial quantities is produced in Klamath County north of

Klamath Falls there are, I believe, some fairly large points of origination not very far north, and some smaller ones quite a distance north, in Klamath County. The farther north you went from Klamath Falls in Klamath County the greater the savings via the cross-State line would be made to appear.

On page 109 the section where in the second column I have the abbreviation for "miscellaneous," that is the traffic, loaded traffic eastbound, or the traffic eastbound other than forest products originating in these various counties in western Oregon. (841.) The computations of the cost via these various routes, and the savings to be made by the cross-State line in comparison with the existing Roseville route and the proposed Alturas route, are computed on the same basis as those for forest products.

450 On page 108, the last item there, "Other counties, forest products," would include Lane County, in western Oregon. That includes all that great group of counties whose products would naturally move through Eugene. There is a heavy production of lumber in Lane County and the surrounding counties. That is indicated by this movement of 14,810 cars from those counties. (842.) The total savings in money by the use of the proposed cross-State line, as compared with the existing Roseville route, for the movement of those 14,810 cars would be $842,837.00. That is on the basis of some one year's actual movement from those counties through Ogden. That includes Coos County, those "other counties." The saving per car by the proposed route, via the cross-State line, over the now existing route via Roseville, from Douglas County, for lumber traffic would be in comparison with the existing route, $37,540.00 in the aggregate, or $49.92 a car. The saving for these other counties, including Lane, would be $56.91. All those figures in that column would indicate the saving per car either on forest products or miscellaneous traffic. (843.)

On page 110 I have shown empty cars westbound to Klamath County, 4,480. That was taken from Table XI. Explaining the figures there in connection with the empty-car movement westbound from Klamath County, and the comparative costs of moving those empties from Granger to Klamath Falls via the Roseville, Alturas, and Crane routes, respectively, the calculations are just as in the case of the loaded cars; the district over which the calculation is made is given under the head of "Route," the pages indicated on which the cost figure will be found, and the cost figure for each district or part of it is set out in the next column, and the total in the last column under the head of "Road haul." The comparison is made in

451 the succeeding columns. The figure $27.20, being the fourth column from the right at the top of the page, indicates that the cost of moving an empty car from Granger to Klamath Falls, or to Klamath Falls, is $27.20 less than via the existing route through Roseville. The cost of moving such an empty via the cross-State (844) line would be $3.40 less than via the proposed Alturas route.

The saving in empty-car-haul cost from Granger to Eugene, or Douglas County, would be $41.23 over the existing line, and $1,743 over the Alturas line, per car. The total number of empties shown on page 111 that moved west is 24,766. On the one-year tonnage statement I have not added up the total savings on the movement of these 24,766 empties west via the proposed cross-State line in comparison with the cost via the existing route through Roseville. I can do so in a minute. On my report the statement refers to all loads, the loads and empties both. You refer to that line, "Saving on Southern (845) Pacific traffic," do you not? That is all loads and empties, all cars moving. I haven't added the total saving on empties separately. On the movement of 4,480 empties west to Klamath County by the proposed cross-State line in comparison with the existing route via Roseville the saving would be $121,856.00. On the grouped counties on page 11, to which I show an empty-car movement in that year of 15,440 cars, the total saving would be $636,591.00. The figure I have shown a little farther on on page 111 of $2,174,024 represents the total possible saving on the traffic of 1926 if it had been moved via the cross-State line instead of
452 through Roseville, the way it went. That saving would be made up of two items, a lower cost for the loaded haul east, and a lower cost for the empty movement west. Adding those two items of saving together gives the (846) total figure of $2,174,024.00. I have separately computed the saving on loaded movement of 3,410 cars from Bend to Ontario by the Union Pacific, via Sherman, on the one hand, that could have been effected if the cross-State line had been built and that traffic had routed via Crane instead. The total saving on that 3,410-car movement, that is, on the loaded movement east would have been $87,637.00. The total saving on the empty-car movement west would have been $57,970.00. If those two items are added to the total saving on Southern Pacific traffic, the saving over the cross-State line in comparison with the existing route would be $2,319,631.00. I will give the corresponding savings compared to the Alturas. (847.) On the Southern Pacific traffic the saving by the use of the cross-State line over what could have been accomplished by the use of the Alturas line would be $859,781.00; then adding that saving which the cross-State line would have produced on the Bend traffic would make a saving there of $1,005,388.00, altogether.

At this point I want to introduce a memorandum. I have prepared a typewritten sheet that I wish inserted in Exhibit 16 as No. 111–A. I stated in my synopsis of the report that I would show that the net earnings—that there could be such a division of joint rates that the net earnings by the Southern Pacific on the short haul will equal what it could make on the long haul (848) via Alturas and still leave enough for the Union Pacific to make
453 its net earnings per mile greater on the haul from Crane to Omaha than at present from Ogden to Omaha. I meant when I said "the short haul" the earnings to the Southern Pacific

on the short haul, the earnings that the Southern Pacific would get as a division of joint rates for the haul it performed from the origin of the traffic on its line up to Crescent Lake. That is what I mean by "the short haul" or other point of exchange.

These calculations here are applied only to haul from Eugene, where the great bulk of the traffic comes from.

To take a car of fir lumber from Eugene, destined to Omaha, 70,000 pounds, at the freight rate of 62½ cents, $437.50 for the car, the Southern Pacific part of that transaction would be as follows:

Its earnings, $253.75, and its cost of haul via Alturas, as shown on page 73 of this exhibit, $174.40. It would therefore have net earnings on that haul of $79.35.

The Union Pacific would get as its share from Ogden to Omaha $183.75; its cost, shown on page 73, $149.50; and net earning for a haul of 990 miles of $34.25, which is a net per mile of $3.46. (849.)

If that had been hauled via Crane, the cost to the Southern Pacific for the haul to Crescent Lake would have been $48.54. Adding the net as given above, $79.35, the Southern Pacific would have had to have $127.89 out of the total in order to get the same net on exchange at Crescent Lake as it would otherwise have on exchange at Ogden.

There would be left for the Union Pacific $309.61. Its cost from Crescent Lake to Omaha, as shown on page 75, would be $242.36.

Its net earnings for a haul of 1,659 miles would be $67.25,
454 which is 4.06 cents net per mile, as compared with 3.46 cents by the existing route.

Take a car of fir lumber from Eugene, destined beyond Omaha, the freight charge divided by the two carriers for the haul to Omaha would be $385.00. I repeat these calculations, and without going through all of them I have this result, that the Southern Pacific's net on the haul to Ogden would be $49.60, and the Union Pacific for Ogden to Omaha $16.25, 1.64 cents per mile.

By way of Crane the Southern Pacific should have had the same net earnings by receiving $98.14 out of the gross, the Union Pacific would have had less $286.86, and its net on that haul would have been $49.25, or 2.97 cents net per mile. This sheet would indicate that out of joint rates on the same basis as exist now, but made applicable via Crane, the Southern Pacific for its haul up to Crescent Lake might (850) receive the same amount of net earnings as it now gets for turning the traffic over to the Union Pacific at Ogden, and at the same time allow the Union Pacific a sufficient increased amount of net earnings to substantially raise its net earnings per mile for its haul from Crescent Lake to Omaha or beyond. Its haul would be increased to pretty near double, and it would make more net on each mile at that longer haul.

I go next into the question of joint rates intended to produce a result similar to that which is indicated on the page which I have just read. It is quite obvious that the savings made by the use of

the cross-State line cannot all be allotted to the Union Pacific, assuming that it is the company which builds that line, for the Southern Pacific must be compensated for the loss of the long haul.

455 That company is now proposing to build from Klamath Falls to Alturas and to send its Ogden business over this route instead of through Roseville. This route would be 210 miles shorter than the present, although it would still be circuitous, in comparison with the cross-State route. I believe the cost is estimated at about five million dollars. (851.) I mean the cost of the new line via Alturas. That estimate was made, however, at a time when the N.-C.-O., the narrow gauge, had not been standardized, and that cost was estimated to include that. That standardizing has now been done. I don't know the cost of the 100-mile link from Alturas to Klamath Falls. The five million includes the broad gauging of the N.-C.-O.; that is what I understood was the original cost.

Table XII shows that with that line the Alturas line could have saved on the 1926 traffic the difference between these two figures of savings which are given on page 111, which would be $1,314,243.00. The cross-State line, estimated to cost about nine million, could have effected further economies on the same traffic of $859,781.00, and on business to and from Bend of $145,607.00. That business from Bend is business that is now handled by the Union Pacific only.

I did not take into consideration what the Great Northern and Northern Pacific are moving out of there (852) through the Oregon Trunk, by way of other routes, even, than the Union Pacific, because that would not be affected by the cross-State line, unless the building of such a line diverted the traffic away from these carriers, and I haven't gone into that question nor made the assumption that that could be done. I assumed that all the Southern Pacific traffic will be diverted, but nothing from the northern lines. These

456 savings alone will justify the construction of the Crane cut-off and the diversion of traffic through it, even if the Alturas line were already built and in use. The cross-State line is therefore an economic necessity, both to the communities to be served and to the carriers themselves. It involves, however, the diversion of traffic from one carrier to another with loss of the long haul by the originating line, and a plan must be devised which will permit such routing without injustice to either carrier. I recommend the plan which follows:

Recommendation: Let the Union Pacific be required to build from Crane to Crescent Lake within a reasonable time, with the assurance that for a period of three years thereafter the joint rates established for interchange at Crescent Lake will be such as to give the Union Pacific about 85 per cent of the saving over the existing route via Roseville as compensation (853) for its investment, while the Southern Pacific would receive the remaining 15 per cent as an addition to its net revenues, without any additional cost.

Let the order of the commission which requires the building of the cross-State line provide that whenever the Southern Pacific, after the expiration of the 3-year period, completes the line from Klamath Falls to Alturas there shall then be established a new set of joint rates at Crescent Lake, the effect of which shall be to give the Southern Pacific net earnings on freight turned over to the Union Pacific at Crescent Lake equal to those which would be earned by it on delivery of that freight to the same carrier at Ogden, under the joint rates now existing.

457 Let it also be required that the Southern Pacific shall thereafter deliver to the Union Pacific at Crescent Lake all freight which originates north or west of Crescent Lake, or within a reasonable distance south thereof, and which is destined to Ogden or points east.

In order to demonstrate the feasibility of making divisions of rates which will accomplish the results desired, I have assigned certain percentages for such divisions and have calculated the effect of their application to the freight now moving, taking the record of 1926 as its measure.

The computations which follow will show that by this plan (854) both carriers will profit by the use of the cross-State line, and yet that such inducements will be held out to the Southern Pacific to build the Alturas line as to insure its construction within a reasonable time. In connection with the recommendation I have just made, my discussion on this point is based on the assumption that the Union Pacific System lines would construct this cross-State line between Crane and Crescent Lake.

I first take up this proposed 3-year period in which the division of rates is to favor the Union Pacific by a greater amount than would ultimately be arranged for, and I feel with this now first on the basis only of this existing traffic, that is, the traffic which did move in 1926.

I first estimate the net earnings of both lines on the freight now moving via Roseville, and then show the effect on each of these proposed divisions at Crescent Lake on the haul via Crane, and then I make a similar calculation on the basis of the division to be made after the Alturas line is built and in use.

458 Now, the rates which I have obtained to apply here are only those on lumber, but over 80 per cent of all the traffic in question consisted of lumber, and I think that if an equitable (855) division of earnings on lumber can be suggested it would necessarily follow that there could be no difficulty in accomplishing the same thing on other commodities. In these calculations now in order to apply rates I have again gone back to the method of applying the 60 per cent ratio to each loaded car movement, instead of treating them separately as in the Table XII just completed, and for that reason, since the actual ratio of empties to loads was about 95 per cent, instead of 60, on that movement, the savings which I will show

in the succeeding tables do not equal in total that which appears in Table XII. I don't think that higher ratio is a normal one. I think that with the establishment of a more direct route through here that conditions will come to be more nearly as they are on other routes. I therefore take that 60 per cent ratio. I take up—well, let's see the rate that lumber from Eugene to Omaha is 62½ cents, of which the Union Pacific takes 42 and the Southern Pacific 58 per cent. On the rate from Eugene to points beyond Omaha, 55 cents is assigned to the haul to Omaha, and the two carriers divide it in the same proportions.

I take up in my first consideration the fir lumber from Eugene, and consider first a car destined to Omaha, having 70,000 pounds, and a total charge of $437.50. On that basis, on the basis of the division as now made, the gross earnings of the Southern Pacific would be $253.75, the direct cost $222.90, the net earnings for the 1,134-mile haul $30.85. (856.)

The Union Pacific, receiving $183.75, with a direct cost of $149.50, would have net earnings of $34 25.

459 Now, I suggest a division of 17 per cent to the Southern Pacific on this rate. In that case the Southern Pacific would receive for the gross earnings from Eugene to Crescent Lake $74.38, while the direct cost would be $48.54, a net earning of $25.84, for 96 miles, which would show a decrease in the net of $5.01 under that division.

The Union would receive for its gross earnings $362.12, at a cost of $242.36, a net of $120.76, or an increase in its net earnings of $86.51.

The figure of 1,659 miles is the distance from Crescent Lake to Omaha.

A similar calculation follows on a car of fir lumber destined beyond Omaha, where the total earning is $385.00, the gross earnings of the Southern Pacific from Eugene to Ogden $224.00, and its cost $222.90, leaving it a net earning of $1.10, for a haul of 1,194 miles. Now, for the Union Pacific, its gross earnings would be $161.00, and its direct cost in this case somewhat reduced, since it would cost less in interchange than for delivery to a consignee—its cost $144.75, and its net earnings $16.25. (857.)

Now, if that were hauled by way of Crane, the Southern Pacific, receiving 17 per cent, would get $65.45 at Crescent Lake, and its cost would be $48.54, its net earnings $16.91, or an increase in its net of $15.81.

The Union Pacific would get $319.55, at a cost of $237.61, or a net earnings of $81.94, an increase in its net earnings of $65.69.

Take next a car of pine lumber from Klamath Falls, 51,000 pounds, at 62½ cents, $318.75. Under the present haul,

460 Klamath Falls to Ogden, the Southern Pacific gross earnings, $184.88, direct cost $170.10, net earnings $14.78.

Union Pacific gross earnings, Ogden to Omaha, $133.87, direct cost $145.02, net loss in 990 miles, $11.15.

I suggest that on an interchange at Chemult of freight from Klamath Falls the Southern Pacific be given again 17 per cent of the joint rates. The Southern Pacific would then have for the haul from Klamath Falls to Chemult $54.19, at a direct cost of $28.85, net earnings of $25.34, an increase in its net of $10.56 per car.

The Union Pacific would have for its gross earnings $264.56, at a direct cost of $234.86, net earnings of $29.68, an increase in its net earnings of $40.83.

If this car of lumber were destined beyond Omaha, the gross earnings of the Southern Pacific under the present route would be $162.69, direct cost $170.10, net loss $7.41. (858.)

Union Pacific gross earnings, Ogden to Omaha, $117.81, direct cost $145.02, net loss $27.21.

If it went by Crane, the Southern Pacific would receive at Chemult $47.69 on the same 17 per cent division, at a direct cost of $28.85, net earnings of $18.84, an increase in its net earnings of $26.25.

The Union Pacific would have gross earnings of $232.81, at a direct cost of $230.13, net earnings of only $2.68, but an increase in its net earnings of $29.89. (859.)

Next on line lumber from Medford to Omaha, a car of pine lumber destined to Omaha, 56,000 at 62½ cents, $350.00. The Southern Pacific gross earnings from Medford to Ogden $203.00, the direct cost of $189.46, net earnings of $13.54; Union Pacific gross
461 earnings from Ogden to Omaha of $147.00, a direct cost of $146.78, net earnings of 22 cents. If it were by Crane, I would recommend that 24 per cent of the joint rate be allotted to the Southern Pacific. It would then receive $84.00 at a direct cost of $72.10.

These pages are indicative and representative of the calculations I have made and the illustrations I wanted to give of the recommendations I had to offer on joint rates, the division of joint rates. (860.) I think probably there have been enough read. On page 117 I check up the division proposed after the construction of the Alturas line.

On page 115, as to whether the Union Pacific is only earning 22 cents for a haul of 990 miles, it is practically an even break; not making anything at all on those little loads of pine lumber hauled over those long distances at these rates. My proposal in substance would mean that the Southern Pacific would make more money for the shorter haul, that the Union Pacific would make more money out of their longer haul, and that the shippers would get the benefit of the short route by quicker movement and the better service that would naturally accrue to them and that there would be no loss to anyone. (861.)

For the Alturas line I have assumed that the existing rates and divisions of rates at Ogden would continue, if the traffic moved via that route, and I present another set of similar calculations with a proposed joint rate arrangement intended to give the Southern Pacific the same net earnings on the short haul to Crescent Lake

that it would have if it hauled it through Alturas to Ogden, and then I leave the Union Pacific to make the balance of the saving as its increased net earning as compensation for building the
462 cross-State line. In this consideration, after the Alturas line is built and the joint rates are made on that basis, I do not calculate on any freight from Klamath or Jackson Counties, because that freight could not be divided on the basis proposed of protecting the Southern Pacific fully in its possible net earnings by way of Alturas. I therefore leave it out of the calculation, assuming that the Southern Pacific will take all of that by Alturas. I likewise omit fir lumber going to Utah and consider that that would move through Klamath Falls and Alturas, although there would be for parts of its at least some saving made by hauling it through Crane and Pocatello. (862.)

The results of these calculations just gone over are shown in Tables 13 and 14, where I summarize the net earnings of both carriers under both these sets of rates.

Table 13, at the bottom of page 119, gives the total increase in net earnings of Union Pacific on account of the cross-State line; the figure is $1,805,880; and on Table 14 the net earnings of the Southern Pacific, on the same traffic, $298,761. The figures I have just given are figures for the savings in one year, assuming that the traffic was the same as that actually moved in 1926, as shown by my Table 11. This takes into account the savings via the cross-State line to either or both the Union Pacific and Southern Pacific; this includes westbound traffic as well. This covers all of that traffic which was shown by Southern Pacific statement to have actually moved in 1926 through Ogden. (863.) Neither of these tables of savings shown takes into account traffic originating in Idaho and moved west over the cross-State line, or originating in Oregon and moving into southwestern Idaho by the cross-State line, or anywhere in southern
463 Idaho. I assumed that no such traffic would have passed through Ogden; therefore would not be included in these figures.

In Table 15 I show the net earnings on this 1926 traffic by the proposed routes for the Union Pacific and for the Southern Pacific both, on this basis of division of rates intended to permit the Southern Pacific to make as much as though it hauled the traffic through to Ogden. Those figures for the Union Pacific are $715,340, and for the Southern Pacific $18,317. That figure, however, merely represents the fact that the Southern would be fully protected on the basis of the figures which I have given here; that is, that according to this division and on this traffic it would have made actually $18,000 more than if it had hauled it through Alturas to Ogden. Perhaps a little more explanation might help there on that.

And in all of these tables I presented the earnings of these carriers both by the present route and by the route proposed to be considered; that is, in the first part of Table 15, if (864) the Union Pacific were to receive this traffic, all of it, at Ogden, it would make

$393,801 of net earnings, while if it received it at Crescent Lake it would make $963,534, plus the saving that could be made from Bend of $145,607, leaving it an increase of net earnings by virtue of the cross-State line of $715,340, whereas the Southern Pacific, if it hauled it through Alturas to Ogden, would make $1,035,196, and if it interchanged it at Crescent Lake instead would make this figure of $1,053,513, showing that these rates do or would fully protect the Southern Pacific. It is the intention that it would not suffer monetary loss by diversion of this tonnage from its Roseville route to
464 the cross-State route under the basis of dividing joint rates as I have suggested—a compulsory diversion of the traffic under rates which would fully compensate the carrier who is compelled to divert it, from whom it is taken. Those results as shown in those last three tables are not based on the assumption of any increased tonnage over the actual movement in 1926 that I showed in Table 11. These calculations have been made chiefly for the purpose of obtaining figures of earnings per car, and also to show the extent to which the existing traffic line would support the proposed line. (865.)

Now in coming to the estimation of the total earnings which the Crane cut-off might make, I assume that this 1926 traffic, that is, an equal volume of it, is going to continue to move.

Exam. ROGERS. Before you come to that, Mr. Newell, I don't know whether I can ever understand all of this or not, but the thought just occurred to me and I would like to see what you think of it: I have in mind that in several of the cases the carriers have used a figure of around three mills per gross ton-mile for haulage costs. I was wondering if you could take that figure as a starter and apply it to the tonnage and to the decreased mileage and get a figure which would be comparable with your savings that you set up in your exhibit.

A. I can apply the figure—did you say at three mills per gross ton mile?

Exam. ROGERS. Yes.

A. Was that intended to be applicable to the roads of this western district? I do not know at all off-hand whether that represents a fair cost figure for this district or not.

Exam. ROGERS. I am not certain about this, but I think that was used by the Santa Fe and the Southern Pacific.

A. Well, without expressing any opinion as regards its applicability from a cost standpoint, I would be glad to make
465 you the calculation and show you the results, whatever they may be.

Exam. ROGERS. All right. The question would be whether (866) three mills was the proper amount to apply.

A. I do not know whether that is the average cost.

Exam. ROGERS. I say that would be the question, wouldn't it?

A. That would be the question; yes. Of course if that were too low a figure, for example, all these operations by the Southern Pacific would show a higher net earning than they ought to, and consequently a division of rates to give them a shorter haul would require for them a larger compensation, leaving less out of it for the other carrier. That is the way it would distort the results, if that were the fact.

Exam ROGERS. Go ahead.

The WITNESS. How far did I get?

Mr. MCCULLOCH. You had just started to discuss the estimated earnings of the cross-State line.

The WITNESS. Oh, yes.

466 Well, I figure that this 1926 traffic will continue to move in the same volume in itself, and that the timber of western Oregon will continue to move to eastern markets by rail, whether shorter routes are provided or not, and, therefore, it is proper on the future as well as the present lumber traffic to credit the entire increase in net earnings to the Union Pacific because of this short route, and, third, that the estimated increases in traffic from western Oregon other than lumber and the westbound traffic expected from eastern Oregon and southwestern Idaho, ought to be (867) calculated at some rate less than the preceding.

Now as to the amount of earnings to be credited to this traffic I am depending entirely upon a later witness, Mr. Wiggins, who has prepared estimates and will present them as exhibits here of those earnings. I don't put them forward as of my own knowledge at all, but I use them here for the purpose of making the presentation clearer than it would be if I waited for him to put his figures in first. What I have calculated myself in this is the cost of haul.

Mr. Teutsch has already presented his exhibits in this case, and some of what I put in here is merely explanatory of his own work. It is not necessary to repeat it. I have tabulated his data in a form convenient for my own use in Table 16, which begins on page 124.

I have dealt here only with the carloads, ignoring the tonnage, because my calculations of cost are made by the carload; and in that table I have undertaken to find out how much more traffic Mr. Teutsch estimates in these years than was actually moved in 1926, for the reason that I wanted to treat the two separately, having
467 already obtained figures applicable to the 1926 traffic, and for that reason I show them in the form that I do where they are tabulated in the first part of Table 16, showing from each county Mr. Teutsch's total estimates of carloads of fresh fruit, and then subtracting from that the amount which actually did move in 1926, the difference (868), not stated in the table, being the figure which I want for my own use.

The table, I think, needs no other explanation. It speaks for itself. The first part of it is of the tonnage going out from the counties named eastbound, then the westbound from certain counties

and to certain counties, that is, from certain counties without regard to the destination, and others to certain counties without regard to the point of origination, the only thing of interest here being that it would pass over the cross-State line.

There is a little duplication in these figures, as the wheat of Malheur and Harney Counties is here assumed to make a part of the feed which is used in the western Oregon counties, and, therefore, it is not included in the totals. That applies in the tables of other years.

I have given here these estimates on the basis of the first year, the third, the fourth, and the fifth, it being assumed that the traffic of the second year would be the mean between the first and the third, but that in the fourth and the fifth years there would be no traffic moving over the cross-State line from Klamath County or from Jackson or Josephine Counties. There would be included feed into Josephine and Jackson Counties on the assumption that that would move if originating on the cross-State line or east of there, would move through Eugene and thence south, so that the cross-
468 State (869) lines would get the haul on it; but for products going out of those counties eastward it is assumed that they would then move through Klamath Falls and Alturas.

In a later exhibit I shall be able to show an estimate of the earnings which would come from the traffic westward out of Idaho, and I hope we shall be able to get one prepared in time for a similar showing of what is expected to go into Idaho, but that is going to depend, so far as I am concerned, chiefly on Mr. Wiggins, and I don't know whether he is going to have time to get it in conjunction with the Idaho people or not. As to Jackson County, 2,473 cars, in re using fruit crop out of Jackson County to move through Eugene and over the cross-State line would say that was Mr. Teutsch's estimate of what could move that way. I didn't understand that that figure was conditional on the Butte Falls line at all. He didn't so represent it to me. I think that covers all of Table 16. That is merely putting (870) Mr. Teutsch's estimate into shape for the application of my own cost figure further on. Now I take up next the expected increase in lumber shipments.

The Southern Pacific lines in Oregon serve a territory that is equal to the area of the State of Ohio. Practically all of the tonnage on that area must pay tribute to the Southern Pacific in some form. That territory contains about 300 billion feet of standing timber, which would make 11 million carloads. A large part of this 300 billion feet of standing timber in Oregon is practically all tributary to and dependent on the Southern Pacific for rail trans-
469 portation to markets. The Southern Pacific is the nearest road to nearly all of it. A good deal of it hasn't any rail service at all yet, and it is not required that it should have, but it all lies within the territory that might be considered as the Southern Pacific's natural territory. The Southern Pacific's approximate an-

nual traffic in lumber now from western Oregon is around 75,000 cars of lumber and 125,000 cars of logs. Now continuing (871) with the timber resources of Oregon. Well, this map is intended more as an illustration than anything else to show the location of the timber of the State, so far as it affects anything here concerned. There is some timber in the northeastern part of the State, and a little possibly in the extreme southeastern, which is not shown on this map because it is not of any interest in this case. But these figures represent the best figures obtainable from the assessors of the various counties as to the timber in those counties upon which the owners are paying taxes. It has been compiled from different sources. Some county assessors have better information than others, but it is, all of it, obtained from that source, so far as privately owned timber is concerned. I did not prepare this map myself, but it was done in my office and under my direction. I gave the directions for its preparation. It was done by one of my employes.

(Said map was thereupon marked "Exhibit No. 17, Witness Newell.") (872.)

A source of information as regards standing timber in national forests was obtained from the national forest records here in Portland. It is not quite clear on this photograph, but it is clear upon the large map here, a difference in color of the stars. All the green stars there which are shown by a comparatively light color
470 on the exhibit are indications of timber in national forests, while the red stars on the big map, or the dark stars on the exhibit, the darkest ones, indicate privately owned timber. And this map purports to show the proper amount of timber in each township as accurately as it can be done in this manner. Each of these stars represents 50,000,000 feet of standing timber.

There are about sixty-eight hundred stars on the map. I haven't my note here of the exact number. It is about that, representing about 340,000,000,000 feet of standing timber. (873.) I should correct that. This timber out here in the eastern part, the central part of the State, is of course not tributary to the Southern Pacific—not intended to be represented as such; but there is about 340 billion feet, all told, shown on this map. The timber on the east slope of the Cascades, north of Bend, is not considered tributary to the Southern Pacific. There is 340 billion shown here in stars; 300 billion of it lies in the territory which is generally considered as Southern Pacific territory. There are other roads, like the Oregon Electric, which come into it and which can serve it, of course.

I haven't undertaken to show on this map, Exhibit No. 17, by stars, all of the standing timber in (874) the State of Oregon. That is estimated at about 400 billion feet.

This map is intended chiefly as an illustration showing the density of the timber and its location in different parts of the territory, and also the magnitude of the traffic question involved here. I have

shown on this map the location of the present line of the O.-W. R. & N. from Ontario to Crane. That is indicated by the heavy
471 black line on the right-hand part of the map. The solid red line from Crane over to Crescent Lake is the proposed cross-State line. The broken red line is an alternative route via Bend. The Southern Pacific Company's main lines in western Oregon are shown by heavy black lines to make them more conspicuous. My thought was that the Union Pacific, the O. S. L., would operate between Bend and Crescent Lake also. There is joint use by the Union Pacific, that is (875), the O.-W. R. & N., and the Oregon Trunk, of part of that line into Bend, especially the part where you enter Bend. There is joint use from Sherman at the mouth of the Deschutes River up to Bend. There is no joint use beyond Bend to Klamath Falls.

My assumption is that if this scheme were carried out that would be a natural thing to follow, would be a joint arrangement in there. Therefore I have not considered any haul through there as a two-line haul. As to where the terminal would be at Bend, that would be a question rather of operation. I would assume—I would consider it necessary for the purposes which the Oregon Commission desires here, that if this broken red line were adopted and it was built to Bend, that there should also be a cut-off, as indicated by the broken red line, into Crescent Lake further south than Bend, so that the route across the State might be through Bend, then southward, and then by that shorter line to Crescent Lake instead of going on south and around that triangle, and that that would be—the operating division would extend to Crescent Lake; that that (876) would be the operation of the Short Line or the Union Pacific.

As to how general or widespread the distribution of lumber was from Southern Pacific points in Oregon throughout the United States, their statement furnished us shows that lumber went
472 from Southern Pacific points in Oregon by rail in 1926 to every State in the Union, except Washington, and it went by way of Ogden to every State save five. I stated there in the text that 22,000 cars in 1926 took this route via Ogden to various eastern markets, as shown by Table 12, but evidently in making that statement I omitted to add in this later small amount of traffic received from the smaller roads, so that—no; I guess I did get that in; about twenty-two thousand.

As to the principal present sources of supply of softwood lumber in the United States, would say the Southern States and the west coast, chiefly the Northwest (877) Coast States, including Idaho. I have collected some information on the subject of production at present, and the probable trend of production in the future, in those two producing territories of softwood lumber, that is the Southern pine States on the one hand and the Pacific Northwest on the other.

It is not made from my own knowledge, but from collection from statements by authorities; and I have here what is headed as "Mr. Dunham's estimates on production," Mr. Dunham being the industrial engineer for the Southern Pine Association, and he gives estimates of production of pine lumber in the South. The trend of those estimates is a very distinct downward tendency, which would indicate that in the course of a few years that territory must naturally cease to export any great quantity; that is, its production would not be much in excess of its own needs. This estimate was made in 1924. The figures are stated by Mr. Keith to have been accurately checked—I mean to have proven accurate for 1925 and '6 and '7. (878.)

As to an investigation to show imports of softwood lumber
473 into various States and regions of the United States, I took the figures shown by the National Lumber Manufacturers Association in a book which they published in 1925, and which covered the distribution of softwood lumber for the country in 1923. I have not been able to find anything of later date that covers the ground with anything like that completeness. That shows the figures which are given here as Table 17. That indicates a widespread and general distribution of fir lumber throughout the United States. That indicates a growing—indicates that it had even at that time become fairly widespread. The largest territorial distribution of Douglas fir lumber for that year was California, the Atlantic States as a group would be the next largest, as given here in this table. The following table, entitled "Exports of lumber to other States and countries," shows of the producing States how much they used and how much they exported, exported here being used in the sense of exporting to other States, not foreign. Going back to the upper part of Table 17, the total imports for the year 1923 of fir lumber into these (879) various States and consuming localities were 5,600,000,000. I have not put anything in here as to the amount of present timber in the South, standing timber. I have data on it in my files, but not here. I have shown on page 128 approximately one hundred twenty-seven to one hundred thirty billion feet of standing timber in the South at January 1st, 1926. That was Mr. Dunham's estimate. On page 128 that was Mr. Keith's estimate. And for the same date the corresponding amount of standing timber for the State of Oregon would be more than 340 billion feet—altogether, about four hundred billion. That is the figure (880) commonly accepted for the
474 State of Oregon. There are varying estimates in regard to that. That is the State forester's estimate. There are other estimates that put it as high as five hundred billion. The figure of standing timber in Oregon at the present time lies somewhere between 400,000,000,000 and 500,000,000,000. This is as compared with 130,000,000,000 in the Southern States.

As to the consumption of softwood lumber in the United States at the present time and the probable trend of consumption in the future, the figures show that there is a tendency to decrease in the consumption of timber in spite of the increase in population. I

would anticipate that as the Southern timber disappears from the market and it becomes necessary to rely to a greater extent than at present on Western supply, that that tendency would likely be accentuated because of the cost of the long haul. So that I would look for future consumption to be less than that of the past. I have made estimates of future consumption in connection with my investigation, but confining myself only to certain states which (881) are named here, and named because they must depend upon other States for most of their lumber and must get it by rail; and for those States I have assumed that their consumption would be 15 per cent less than their actual consumption in 1923, that is, their consumption at whatever time the South ceases to export; so that the effect of the long haul in diminishing per capita consumption would have reached its full effect. I say Table 18 contains this estimate of mine of annual imports of lumber by rail from the Pacific coast when the South ceases to export. I do not know when that will be. It can't be very many years in the future, but it is quite likely that it will taper off gradually; that the decrease,
475 while rather rapid now, may not be so rapid in its exports in the future, so that it will taper off gradually; but certainly it can't be many years before it comes down to a point where it will have no very great influence on the market. My judgment respecting the trend of production and shipment of fir lumber in the Pacific Northwest to consuming markets in the United States is that it must increase. There is no other source of supply known, or at least none that is available at all. This territory has the greatest amount of standing timber that can be found (882) anywhere now, I believe; certainly the greatest amount that can be found anywhere in the United States.

These States which I have named here, I would estimate, are going to have to use about eight billion feet of lumber per year, that being about a billion and a half less than they did use in 1923, and gradually they are going to come to the time when they must get the greater part of that from this coast.

Now Oregon seems to be the natural source of supply for timber to go out by rail, because Washington has so many of its mills where they can take advantage of water shipments, and they therefore would naturally, where they can, ship by water, because it is an advantage to do so, and particularly the part of the territory most nearly confined to the Southern Pacific, as its outlet is too far from water to take advantage from that to the same extent that they can with the Washington mills; so that I think it is not unreasonable to figure (883) that Oregon ought to furnish about 40 per cent of that eight billion feet when that time comes
476 that they draw it from this coast. Now that would amount to about 150,000 cars a year, and, as far as I can judge from the origination of lumber by the different roads in this State, we are sending out less than fifty thousand cars a year now eastward by

rail. So that here you have at this end of the line the greatest body of standing timber in the world and eastward from it a market that ought to have eight billion feet a year. To furnish a half of it from the Oregon mills will require an increase of 200 per cent over the present movement—I should think within the next ten or fifteen years. I am not basing any of my calculations, however, on the certainty that it would occur within such time. It is a situation that we are approaching. I think it is inevitable at some time not very far distant. Constructing this cross-State line will shorten the existing routes into the market by 400 miles, and will make Oregon the nearest source of supply to the greater part of that market. I think these conditions I have just mentioned point to a considerable increase in production and shipment of lumber from Oregon within the next few years. And I am interested, however, only in so far as they may increase this movement out of central Oregon (884), or western Oregon, rather, where it might pass over the cross-State line, and I have assumed, and I have estimated there, that the next five years ought to see a 50 percent increase in that traffic, provided the improved facilities are furnished, if the cross-State line is built. That increase would amount to about 14,000 cars more than have been moving; and it is on that estimate that my calculations of future earnings for the cross-State line are based.

I think that covers timber and lumber.

477 It Table 19 I have collected all of these foregoing estimates. It includes for the first year, under the head of "Traffic diverted," that traffic already moving, that is, the 1926 traffic, and the earnings per car set up there opposite each car are the increased net earnings to the Union Pacific under this proposed division of rates which I have suggested; so that, as far as those figures are concerned, that is a repetition in that table of what appears previously in Table 13.

The second part I have named, for the lack of any better (885) name, "Traffic created," meaning by that this traffic which Mr. Teutsch has estimated will be ready to move over this line, in addition to similar traffic, or as entirely new traffic where none now exists at all. The figures in the second part of this Table 19 for the first year are taken from Table 16 of the first year, and the figures given of dollars for each car are the cost of haul of those cars over the portion of the cross-State line indicated, and the total is the total cost according to the number of cars. When I say "cost of haul" I mean direct cost only. That is given both eastbound and westbound and gives me a total cost, direct cost, for the first year traffic of that kind, of $149,334. Then the exhibits which Mr. Wiggins will present will show the gross earnings which he considers should be credited to that traffic and the net earnings then are found by taking the difference on that traffic, $134,996, which, added to the $1,805,880 of the first part of the table, makes total

net earnings of the cross-State line on the Oregon traffic of $1,940,-876. The figures for cost of haul under this computation traffic created, include everything, that is, empty-car haul as well
478 as loaded movement. (886.) I haven't shown similar information for the second year; that is because I consider that would be the mean of the first and third years.

Regarding the result I anticipate for the third year, taking that increase which I had estimated on lumber, I have for the first part of the table $2,204,831, and for the figures as estimated by Mr. Teutsch a direct cost of $197,238, gross earnings from Mr. Wiggins' $352,883, leaving a total net from all sources of $2,360,476.

I did not assume in this first table, or rather, the first year, that the majority of this traffic would move the entire distance from Crescent Lake to Crane; that is 180 miles. It is indicated according to the country in which it originated. You will observe there that of this traffic created there is in the first year fresh fruits moving from Cross Trunk Junction to Crane. I would consider that as coming from Medford through Klamath Falls. On this traffic that is created I did not include any increase of revenues on any other (887) haul. I didn't know just how we ought to get at that. I didn't want to overestimate it; so what Mr. Wiggins and I agreed to do was to obtain, as he will show, reasonable rates in accordance with existing rates, which he will quote for the entire length of the haul, whatever it might be, was anticipated between the point of origin and the point of destination, and then attribute to the portion of the cross-State line over which that traffic moved a per mile proportion simply of the total gross earnings, and in that way he obtained those gross earnings which I have used here. That takes no credit, therefore, to the cross-State line for whatever might be earned on other parts of the system over which the same freight would move.

479 Exam. ROGERS. That may be clear, but my point is this: You originate tonnage on the cross-State line by reason of the cross-State line that does not now move, and we will say that that tonnage moves over the Union Pacific to Omaha; it seems to me that the Union Pacific would be profiting by additional revenue off of the cross-State line, and also the additional revenue for the haul from Ontario to Omaha.

A. That is true, but I thought it would be quite a difficult matter to substantiate any estimates made because of uncertainty as to the points of destination, how far it might be hauled, and I thought it better for this case to leave that out of my consideration and be under rather than over in the amount of revenue that ought to be attributed to this line. (888.)

Mr. SPENCER. Well, you would not add anything to the earnings of the Union Pacific Railroad Company in any event, even if it made it, on business originated by the cross-State line, would you?

A. I have not done so as regards this traffic.

Mr. SPENCER. I know, but you repeated several times that you wanted to be under rather than over; the earnings of other railroads haven't anything to do with it.

Exam. ROGERS. My illustration might have been put just as well off of the Oregon Short Line, Ontario down to the junction with the U. P.; and I take it your answer would have been the same?

The WITNESS. Yes.

I estimate that the cross-State line when built will originate tonnage that will move over the Union Pacific system lines east of Crane, the present Union Pacific lines east of Crane. I have not relied on any earnings, gross or net, that the Union Pacific
480 system lines might obtain from such tonnage that they haul which originated on the cross-State line, anywhere in my study or report. Let me make that clear now so there won't be any misunderstanding as regards this lumber traffic, this which I have called "traffic diverted": On that I have credited to the (889) cross-State line the increased net earnings accruing to the Union Pacific system through that haul regardless of the question of any intent to allocate them especially to any part of that haul; that is, if on the haul from Crescent Lake to Omaha the Union Pacific would have a net earning $50 greater than on the haul from Ogden to Omaha, I have credited the cross-State line with $50 for
481 that car as the increased net earnings. In doing that I would simply claim for the credit of the cross-State line the Union Pacific's opportunity to handle the traffic eastbound over its lines more economically by the cross-State route than by its present routes. But I have credited the cross-State line there with the full amount of the increased net earnings. (890.)

Going back to Table 19, in the fourth year, according to the plan which I have suggested, all traffic through Klamath Falls to Crane and Crane is eliminated, and a different scale of joint rates to be introduced, giving the Union Pacific a lesser share of the total rates than for the first three years. There is, therefore, a marked reduction in the total net earnings attributed to the cross-State line, both on the traffic diverted and the traffic created. That will be on my assumption made here of the Alturas line being put off three years, three years later than the date of the completion of the cross-State line. As to whether, if the Alturas line is completed next May, that would rearrange all of this, I go into that further on, but that all came up after this was all prepared and in print, or in fact it was not in print but it was beyond correction at least and change. The (891) net earnings, therefore, drop down from $2,360,000 for the third year to $1,340,000 for the fourth year, and amount to $1,238,962 for the fifth year.

Under the head of "Passenger expenses and earnings" I have no comment to make. I think that is sufficiently covered by the exhibit. My purpose was just simply to put in the small amount of passenger business and expenses to balance it, showing practically no net earnings arising out of it. I am not relying on passenger

earnings in any way to justify the construction of the cross-State line, only figuring they will probably (892) pay for themselves.

482 I have to estimate indirect cost of service on the cross-State line, and I do it on lines pretty fully indicated here in the text by a comparison with the indirect maintenance of way expenses, freight and passenger, as shown by my studies of the O.-W. R. & N. and of the Oregon Short line. On page 131 that is what the Union Pacific would have to bear if it acquired the right to use the Oregon Trunk line from Bend to Chemult in order to make these connections and operate trains to a direct connection with the Southern Pacific, instead of having to depend upon an exchange of traffic with the Oregon Trunk, making a three-line instead of a two-line haul.

As to Table 20, that is simply a collection, in tabular form, of the figures which precede it, the net earnings of freight being taken out of Table 19 and those of passenger and indirect expenses and taxes being estimates in the text immediately preceding it. (893.) The figure return in the last column is the difference between the net earnings from freight and passenger service, less the indirect expenses and taxes. In the next paragraph on page 140 I have called attention to certain other sources of traffic. I have nothing else to say on those. I have not attempted any estimates of tonnage, or number of cars that this other traffic, either Coos Bay traffic or the Alkali Lake traffic, would amount to. I do not know what they would be.

Referring to the paragraph headed "Investment and return," the estimates which were presented to the commission in the former hearing on this subject in 1924 put the cost of this cross-State line at $8,318,842 for the 171 miles from Harriman to Odell Junction. Now the conditions have somewhat changed since that time.

483 The crane branch has been extended to Burns, shortening by a few miles the construction necessary at that (894) end of the line, and the Natron cut-off location has been changed, adding some necessary construction at the west end, so that it would now be necessary to build about 10 miles more of road than originally, and that would be somewhat more expensive than the average of the remainder; so that I have raised Mr. Abry's estimate to a total of $9,000,000. The investment in the Oregon Trunk line has been estimated at $908,000, and the total estimated return and the per cent return on the investment for each year are given in the text here. That would make the cost for 181 miles of road about $49,000 a mile, approximately. As to what sort of a line that estimate of cost would contemplate, my recollection is Mr. Abry estimated this on a basis of 90-pound rail. I intended to look that up before I reached this point, but we got to it a little sooner than I anticipated. (895.) That estimate would hardly be comparable to the best main line construction. That would not be called for on the line over there, that would have but moderate traffic to begin with. It would be rather what you would call secondary main line, or a good branch line construction, capable of handling the amount of traffic that is considered

that. The location calls for only an eight-tenths per cent grade, and the country is not such as to require very sharp curvature.

Mr. McCULLOCH. I would like to ask reference at this point to an excerpt from the testimony, in docket 20415, State of Idaho on the relation of the Public Utilities Commission of Idaho against the Oregon Short Line Railroad Company, and others, hearing at Twin Falls, Idaho, April 3rd, 1928. R. Whipprecht, department auditor in the accounting department of the Oregon Short Line Rail-
484 road at Salt Lake City, gave the figure for the cost of the Wells-Rogerson line, the actual amount invested in it as of December 31, 1927.

Mr. SPENCER. I will give you that, if you haven't got it there.

Mr. McCULLOCH. He gave the figure as $3,434,262. Thank you. (896.)

Mr. DAY. How many miles? Is that the entire cut-off?

Mr. McCULLOCH. That is the entire cut-off; yes. The distance is about 95 miles or 97 miles. I will supply the exact figure.

Mr. SPENCER. 94 miles.

Mr. McCULLOCH. 94 miles. I will take Mr. Goodwin's statement.

WITNESS. I am not familiar with the present construction from Ontario to Burns. I haven't seen very much of it. I have not made any computation of the running time that might be expected from Crescent Lake to Ontario of the ordinary freight train.
485 This figure of approximately nine million dollars for the construction of the line includes sidetracks, passing tracks, station buildings, water stations, the various facilities that have to be provided for the operation of a railroad.

As to an alternative proposal, if the Interstate Commerce Commission should hold that this division of rates which I have proposed after the (897) first three years ought to be established whenever the Alturas line is built, I was not going to say anything except what was printed in the exhibit. I notice that it would not be perhaps quite clear, the basis of the calculations here in Table 21. They would not only exclude Klamath, Jackson and Josephine traffic, but they would put the division of joint rates on that scale, which would be lower for the cross-State line than the other; that it, the same that I proposed at the end of the third year; and the results in earnings are indicated on page 142 and collected together in Table 22. (898.)

Supposing the Alturas line is to built right away and to be completed and put in operation by May, 1927, that would not change in any way my testimony and the results of my study, or tend to change my opinion as to the justification for the construction of the cross-State line that I have outlined in my analysis of cost and study here.

The last topic I have mentioned in my report is the alternative route via Bend. I think what I have stated is as completely as I could give it. In a cross-State line from Crane to Bend there ought to be provision for a connection from some point on the Great

Northern south of Bend over to Crescent Lake, in order to give the service that the traffic will ultimately demand, and my comparisons are based on the consideration that that piece of line is built
486 immediately; otherwise the cost of haul by that route would be greater than as indicated here.

On the next to the last line on page 143 I say "these figures justify the seiection of the cross-State line as the preferable route." I mean by the "cross-State line" the (899) more direct line from Crescent Lake to Crane, the original Harriman line, so called.

In Exhibit 16 I have either personally made all of the calculations and prepared the data and information shown therein, or it has been done by employees of mine under my direction. I believe it to be true and correct.

(Exhibit No. 16, witness Newell, was thereupon received in evidence.

Pages 65 to 76, both inclusive, of pamphlet entitled "Rate Structure Investigation, No. 17000—Part 7, Grain and Grain Products, Exhibit of Public Service Commission of Oregon, Transportation Cost Study, by J. P. Newell, Consulting Engineer," was thereupon received in evidence, marked "Complainant's Exhibit No. 16–A, Witness Newell."

Map, marked for identification "Complainant's Exhibit No. 17, Witness Newell," was thereupon received in evidence.) (900–901.)

486½ [File endorsement omitted.]

487 JAMES C. PALUMBO was thereupon produced as a witness on behalf of complainants, and having been first duly sworn testified as follows:

I live at Payette, Idaho. I am engaged in the fruit and produce business. I have been engaged in that business at Payette five years. (902.) Prior to that time I was engaged in that business in Indiana for twenty-three years. Altogether I have been in the fruit and produce business for twenty-eight years. At the present time at Payette, Idaho, I have a number of warehouses. I have several pieces of property of my own, I am building a new cold storage, nearly a hundred thousand dollars worth. The capacity of that cold-storage building is two hundred cars to be used for apples. That is being constructed at Payette, Idaho. In addition to that I own an orchard. I handle fruit as a producer and also on the commission basis in that community. (903.) The market for my fruit is different each year. I can tell you past years, but I can't tell you the future. I am handling prunes and apples. In the past years I have handled potatoes but not now. I haven't the records with me that show the number of carloads of products I handled in 1923. The records show that in 1923 I handled 373 cars. In 1924 I shipped 410; in 1925, 604; in '26, 470; last year 761. The prospects for the fruit crop for the year 1928 (904) in my com-

munity are excellent. I will ship during the current year approximately eight hundred cars. It will be in excess of what it was last year. Our apples go mostly to the Middle West. In the past I have shipped products to California, mostly in Los Angeles. Have never shipped to San Francisco. I do not know where the Rogerson-Wells cut-off is, on the Oregon Short Line. I never knew of it until to-day; that is, if I had, I had already forgotten it. It
488 has never been brought to my attention that the Rogerson-Wells (905) cut-off was designed at one time as relief for the shippers from my section of southwestern Idaho. I do not go into San Francisco with my apples, because if I would I would have no way to get out of there; I have no outlet when I get there. In case I ship any stuff there, if they reject it I am stuck, so I don't solicit any business there. I had occasion to-day to check up with distances from my community to San Francisco and Los Angeles, by the way of the proposed cross-State route and by the way of the existing route to Los Angeles via Ogden. The difference in distance to Los Angeles by way of San Francisco over the proposed route and by way of Ogden over the present route is fifty-four miles. I am interested in the construction of this cross-State route as a whole; not perhaps particularly myself, but as a community proposition. (906.) If this route is constructed, instead of shipping to Los Angeles direct I would ship my cars to San Francisco; therefore if I have no market there, go down to Stockton, Sacramento, and to Los Angeles, if I am permitted. I believe I could do that under a rate that is approximately my present rate to Los Angeles, the distance being approximately the same. The California market is growing considerably, if I understand correctly, and we are close to them, and naturally we could sell more apples in the territory. If this line is opened up in the manner I have described by way of San Francisco, and I am permitted a rate that will permit me to reach Los Angeles approximately the same as I now have through Ogden (907), I would stabilize a market in San Francisco. It would give me an open competitive market of all California for my products, if the tariff permits it, of course. If the tariff don't permit
489 it, it will do me personally no good, or my growers. If this condition is brought about and I am enabled to ship by way of San Francisco, that would stimulate the shipment of fruit, particularly of apples, from my community. Perhaps that would be reflected in the shipment of such commodities as potatoes from our territory. (908.) Very few cars of fruit were shipped into Los Angeles last year. I don't think it was over ten. If this change were brought about, whether the amount would increase or not is due to conditions of crops each year. I mean now, for example, like the year 1928, which the eastern markets has more than they can consume themselves, and we had to stay in our own boundaries, where last year we could go all over the United States and sell our stuff, because apples were scarce. That is what I mean. Last year

was not an average year throughout the United States. It was an exceptionally good year for Idaho as to the apple movement. We grow in Idaho Winesaps, Delicious, Roman Beauties, and Jonathan apples. (909.) The Jonathans especially are in demand in the California market. A year when there is an average production of apples in the United States I am forced to find a market closer home. That would stimulate the shipment of apples into California.

490 Cross-examination:

The largest number of cars of fruit I have shipped into California in any one year is 190 cars. That was in 1925, if I ain't mistaken. They were all apples. They went to Los Angeles and San Deigo. I think the difference in distance between Payette, Idaho and Los Angeles by way of our present rail route and by way of the rail route as it would be with the cross-State line constructed fifty-four miles. (910.) They tell me the difference between Payette and San Francisco by the present route and by the proposed cross-State line is four hundred miles shorter; that is, it is about four hundred miles shorter around by the new route. We do not sell anything in California besides apples except occasionally a car of prunes. (911.) That is fresh fruit. We ship to southern California by way of the Oregon Short Line and the Los Angeles & Salt Lake Railroad. Those are Union Pacific units through Salt Lake. To Los Angeles it would be a shorter route than shipping to San Francisco and then down on the Southern Pacific. And it is shorter to Los Angeles than it would be if the cross-State line is built. We have to compete with apples that go into San Francisco by boat. We go to San Francisco. Hood River apples and Yakima apples come down here and load on the boat (912); and Wenatchee go down there into the California markets. I try awful hard to break into the San Francisco market with apples. (913.)

491 As to whether I consider that I can get in there on a profitable basis in competition with other fruit, well, for example, last year we went clear to Buffalo, N. Y. That is right next door to New York.

Q. You have got lots of local apples to compete with in California, too, in the bay cities, haven't you?

A. Well, each year has a condition of its own, you know.

Q. Well, I mean, when there is a good yield there, a normal yield—Watsonville and Santa Cruz?

A. Well, they don't raise the varieties of apples that we do.

Q. Do they ship any apples in to compete with you?

A. They would if they had the right varieties, but they don't have.

Exam. ROGERS. I understood you to say that you didn't ship to San Francisco, because if they rejected your apples you were "stuck." Just what do you mean by that?

A. I didn't say I got "stuck," but I might be. I haven't solicited into that market since I have been in business.

Exam. ROGERS. Well, what would be the difference in the situation in that respect if the cross-State line was constructed or if it wasn't?

A. Well, if I go to San Francisco and the car was rejected no doubt I would get a privilege of going to Los Angeles from there, or Stockton or Sacramento, but the tariff wouldn't permit me. (914.)

Exam. ROGERS. Couldn't you do that now?

A. I don't think so.

Comr. MCMANAMY. You mean that there is no through rate to Los Angeles by San Francisco at the present time?

A. I don't think so.

Comr. MCMANAMY. And if the cross-State line is con-
492 structed there would be?

A. That is my contention. I don't know whether I am right or wrong.

Redirect examination:

If I bill my apples into San Francisco now, I have to pay an additional freight rate to get them on to Los Angeles, I believe. And if that line is built, making the distance about the same, I think I would be able to bill the apples to San Francisco and possibly sell them on the San Francisco market or divert them to Los Angeles without an increase in the freight (915) rate. I could not say whether my apples that are going into Los Angeles at the present time are in competition with apples shipped into that market by water.

Recross examination:

Q. (By Mr. SPENCER.) Well, you have got the same chance for that on the present railroad as you will have if they build a few more, haven't you? In other words, you have got a route into San Francisco now through the Rogerson-Wells line or through Ogden, and if you get into San Francisco you have got railroads down to Los Angeles and you have got boat lines down to Los Angeles. What you mean is that you haven't got as many rights there in the way of diversions and tariff privileges as you want? That is what you mean, don't you?

A. If I have those privileges, of course.

Q. You are fixed if you have those privileges. Isn't that right?

A. Well, I will take a chance on opening up new territory.

Further redirect examination:

Q. (By Mr. DUNCAN.) By shipping over that route how do you ship over the route you now ship? (916.) Do you have to
493 ice your cars?

A. No [sic].

Q. Now, in shipping to San Francisco over the proposed route, what result will that have in the cost of transportation?

A. If I am correctly informed, going through Salt Lake City, through that desert country, it is warm there all the time, if I under-

stand correctly—I have been through there several times in my life—and to go over this other route it is much nearer, we wouldn't have to ice them cars at all, and if we did have to ice them it would be just initial icing, which over Salt Lake the initial icing won't do. (917.)

494 PORTLAND, OREGON, *August 8, 1928.*

R. G. LARSON was thereupon produced as a witness on behalf of complainants, and having been first duly sworn testified as follows:

Direct examination:

I live in Ontario, Oregon, in Malheur County. (919.) I am county agricultural agent of that county. I have held that position approximately a year. I have resided in the State of Oregon for the past fourteen years. For a short time I was manager of a wheat ranch in the eastern Oregon section, and from there I taught three years at Corvallis; from there I went to Lake County. I taught rehabilitation work—ex-service men. After my teaching in Corvallis I went to Lake County, Oregon, as county agricultural agent. That was in 1923. I was in Lake County as county agent until I went over to Malheur County, except for a period of about two years. During that time I was manager of a mercantile company in Lakeview. (920.) My work as county agent in those two counties is mainly in an advisory capacity in connection with agricultural work in the counties. That is really our duty. We have to keep informed on all lines of agricultural work, livestock, crops; horticulture—whatever it may be. It involves the character of lands, the kinds of crops suitable for the lands in the country, estimates of yields, and methods of improving yields of crops. Marketing problems are also covered. They are all points to which I have given especial study as county agent of Lake County and Malheur County. I am here as a representative of the Malheur County Court. That court intervened in this proceeding in support of the complaint.

I have prepared a limited brief on behalf of the Malheur
495 County Court that I am ready to submit (921) in evidence here. When I say "brief" I mean a statement of the facts I want to submit. It is in written form. This statement is somewhat general in nature, but I have tried to cover the points which, I think, are important to our section of the country, and it has been prepared by myself under the direction of the Malheur County Court.

Malheur County, Oregon, lying in the Snake River Valley, is generally conceded to be one of the most productive agricultural sections of Oregon. This vast domain, larger than either Massachusetts or New Hampshire, with an area of 9,883 square miles and only 7.7 per cent of her acreage in farms, lies waiting development. The present valuation of her agricultural industry is $19,627,804, owned or operated by 1,331 farmers. The total acreage of these farms is 484,820, of which approximately 122,500 is under irrigation.

We have made the statement that the soils of Malheur County are among the most productive in the State of Oregon. (922.) We bear out this statement by the results of a crop yield survey made by the county agricultural agent in 1925.

66 yields of wheat were averaged, with an average yield of 41.9 bushels per acre; 35 yields of barley.

As to the low yield and the high yield, taken into account in getting that average, I will read the table as I have it. I will read it in this order: Crop, number of yields averaged, low and high yield, and the average yield.

Wheat, 66; low 14, high 76, and average 41.9.

Barley, 35; low 15, high 80, average 48.1.

Oats, 23; 16.6 low, 90 high, 56.7 average.

Corn, 40; 25 low, 90 high, 59.7 average.

Alfalfa hay, 61; 1.4 low, 8.4 high, and 5.1 average. That 5.1
496 was tons per acre. The others were bushels. The average yields before that are bushels per acre.

Clover hay, 7 yields; low 1 ton, high 4.1 tons, and average 2.4 tons per acre.

Clover seed, 12 yields; 3.3 bushels low, 8 bushels high, 5.4 bushels per acre average.

Potatoes, 13 yields; 110 bushels low, 476.6 high, 270.5 (923) bushels to the acre average.

Onions, 4 yields; 125 sacks per acre low, 425 sacks high, 268.7 sacks average yield.

Apples, 9 yields; 100 bushels low, 500 bushels high, 277 bushels average yield per acre.

Now these yields are not selected but are purely average yields. The high yields have been exceeded in many cases and will be exceeded again in 1928.

From my experience during the time I have lived in Oregon and the time I have been county agent in Lake County, and from what I know of production in other parts of the State, I would say that these average yields that I have given for various crops in Malheur County would compare very favorably with yields of the same products in other localities of the State of Oregon, and in practically every case they are higher than most any section of the State.

Approximately 50 per cent of the agricultural income in Malheur County is derived from livestock and livestock products. The county ranks first in Oregon in number of sheep, third in number of beef cattle, and fourth in eastern Oregon in the number of dairy cows. Dairying in Malheur County has more than doubled since 1920 and is contributing quite largely to the income of the farmers on the small irrigated ranches. This (924) expansion in dairying is going forward at a rapid rate.

497 Residents of this section have for the past twenty or twenty-five years been endeavoring to secure Government assistance in bringing water to vast areas that are adapted to production similar to the areas now under irrigation. Their efforts have finally met

with success and the Vale and Owyhee Federal irrigation projects have now been approved and construction has been started. These projects will add approximately 82,000 acres of irrigated land to the areas now irrigated in Malheur County and will provide supplemental water, and will displace present pumping units to the extent of 31,366 acres. All this work will necessitate the spending of about $21,000,000 of Federal funds in Malheur County and the immediate vicinity within the next few years.

I have just mentioned present pumping units. By pumping units I mean that practically all the lands irrigated in Malheur County to-day are irrigated from pumping plants out of Snake River, and this Owyhee project will displace these pumping plants. These private pumping plants require, generally speaking, a lift of water from thirty to sixty feet, in some cases slightly more than that. They run an average of about 40 to 60. That is a more expensive operation to provide water for the lands now irrigated than a gravity system under these (925) Federal projects that are under construction now. The last year the power bill alone for what we call the Shoe String ditch amounted to between $8.00 and $9.00 an acre, the power only.

Ten to twenty acres of these soils, irrigated, and devoted to intensified farming will provide a living for the average family. Forty acres is about all one family can care for without hiring help.
498 The average size of farm under these new projects is estimated at sixty acres. This means about 1,760 new farms on the 105,740 acres of new irrigated lands. Figuring that each settler on these new lands will spend $90.00 per acre in development during the first four years, and those figures are taken from Dr. Mead's report of 1925, there will be expended almost $10,000,000.00 in agricultural improvements. This amount of money as well as that spent by the Federal Government is all being expended with the hopes that the lands will be settled with happy and prosperous farm families. No doubt can be had as to the ability of the soil to produce abundant crops and success will be attained on these new projects if satisfactory markets can be reached.

Many of the people now residing on lands which these new projects will water homesteaded their lands many years ago and have held on under great difficulties in hopes that what is now taking place would come to pass. The Government has (926) shown its faith in southeastern Oregon by taking over the construction of these irrigation projects. In all, 30 to 35 millions of dollars will be spent in the development. The amount of money necessary to provide adequate railway facilities for reaching western markets is small in comparison. Western markets are rapidly expanding, and if these new projects are to be adequately served they must be given access to these markets by a short line from east to west across central Oregon.

The present acreage under irrigation in Malheur County:

From the water of the Malheur River, 35,732 acres;

From the waters of Cottonwood Creek, 173 acres;
From the waters of Willow Creek, 27,602;
From the waters of Owyhee River, 34,500 acres;
499 Big Bend Irrigation District, 5,000 acres;
Park unit Big Bend district, 2,800 acres;
Jordan Valley irrigation district, settled up, 1,500 acres;
Kingman Colony district, 1,200 acres;
Nyssa-Ontario district, 5,000 acres;
Payette Oregon Slope, 5,300 acres;
Small pumping plants (estimated), 4,000 acres;
Making a total irrigated area of 122,807 acres.

This data was taken from the State engineer's report of 1924–26. (927.)

When I say "Jordan Valley irrigation district, settled," I do not mean that that is settled and fifteen hundred acres under irrigation, or when settled there will be fifteen hundred. There isn't that much being irrigated now. I have forgotten the exact acreage, but there is still some acreage to be irrigated there.

This is the estimated present agricultural production in Malheur County, Oregon:

First, beef cattle: We have 39,040 head of beef cattle in the county, with a turn-over of 24.6 per cent annually. In other words, 24.6 per cent of that number should be sold each year, should go to market. This would mean 9,603 head, or 384 cars. When I said "should go to market annually" I perhaps should have said "do go to market each year"; perhaps that would be a little better statement.

These figures of what I call turn-over, these percentages, are based on (928) a study made by Professor Potter, head of the livestock department of the Oregon Agricultural College, and his field
500 man, Mr. Lindgren, and they are taken as an average for eastern Oregon conditions, and, I believe, are lower than the actual conditions in Malheur County, but I have used them as an average.

Beef cattle and sheep and hogs and horses should go to market when they are ready, because the longer you have to keep that stock and feed it the more expense is running up.

Now, another thing in getting them to market, when that stock is put on the cars the quicker they can get to market, of course, the less loss there is to ship. On the first run, which is ordinarily about four hundred miles—the runs are about four hundred miles—cattle will shrink in the neighborhood of four per cent, and about one per cent for each additional run, so that the shorter the distance to market the less shrink you are going to get in them, and on a 1,100-pound steer that would run into quite a bit of money if you stop and figure the shrinkage by, say, three or four runs in comparison with a smaller number. (929.) That is an important item, expedition of movement to market, in the shipping of cattle, sheep, hogs, horses, because every time those animals are loaded and unloaded there is more or less injury done to them. Careless handlers, with

prods, and things of that sort, damage—they damage hides and damage flesh. In my opinion, in the marketing of such farm animals, a saving in distance to a particular market of two or three or four hundred miles in the length of haul is an important consideration. It will save one or two feeds and one or two handlings.

The next item is sheep, 368,000 head of sheep in Malheur County, with a turn-over of fifty per cent annually, which would allow for marketing each year 184,000 head or 736 cars, and from those
501 368,000 head of sheep, with an average wool clip of nine pounds per head, that will provide sixty-six cars of wool each year for shipment.

As to feeding sheep in Malheur County, we are feeding at the present time a very large number of (930) sheep in the county. In the little stretch of country between what we call Dead Ox Flat, or across the river from Weiser, south as far as Nyssa, we winter approximately a hundred thousand head of sheep each winter. We have quite a number of farmers there that are very anxious to feed out lambs, and they are injured in this business because of the fact that our lambs in Malheur County are all lambed in February, they are too large to make feeding lambs at the time these men are ready to feed them, and they are anxious to secure, if possible, the smaller range lambs which they can fatten in that section of the country. Those smaller range lambs might come from central Oregon, through Northern Lake County, Deschutes, Crook and Grant Counties, those counties in there. If this proposed cross-State line were built and in operation a good many thousand head would come every year. I have no doubt about that at all. In fact, there have been a few come in under present conditions where they have had to ship them clear down through—I guess they went to Ogden and came back up to Ontario, from Northern Lake County.

Now going to hogs. (931.) We have 7,705 head of hogs, with a turn-over of 128 per cent annually, which would mean for market 9,162 head, or 98 cars. Explaining that percentage of 128 per cent turn-over, a hog ordinarily reproduces five or six times, on the average, sometimes they will go as high as nine or ten, so that you have a higher percentage of turn-over than you have with either cattle or sheep.

502 Dairy cattle: We have 4,745 head of dairy cows. Figuring their average production of fat as 175 pounds would be the equivalent of 996,450 pounds of butterfat, or 33 cars of butterfat, produced in the county to-day, that is, at the present time.

Horses: Twenty-eight carloads were shipped west last year. I have those figures from freight shipments.

Wheat: Now, on the remainder of these items, I have made a survey of the different freight shipping points, so far as I could get the information, and the balance that I have estimated from other sections. Now, it is hard to estimate exactly, because Malheur County loses a large part of her tonnage through Weiser, Payette, Fruitland, Parma, and Caldwell; she loses a large amount of ton-

nage through those points, and we get no credit for it in freight shipments. (932.)

In 1927, wheat shipments out of Vale, Ontario, Nyssa, and Brogan, amounted to 229 cars. I estimated out of other sections of Malheur County there were 50 cars shipped; total of 279.

The nearest large market for wheat to Malheur County is Portland. I think in every case those shipments of wheat that came west moved to Portland. The surplus production of wheat in Malheur County, what isn't used at home or feed, is increasing. And as these new lands come under cultivation there will be considerably more each year, because wheat lends itself to use as a quick cash crop to these people who are settling the new lands, and they will produce large acreages of it. Soil and climatic conditions are suitable for the increased production of wheat in Malheur County. We
503 have, as I stated a moment ago, a very high acre average in yield, and our average is being exceeded in practically every case by men who really are farmers, so (933) there is no reason why we should not increase our acreage considerably.

Barley: 1927 shipments out of Vale, Ontario, Nyssa, and Brogan were 27 cars, and estimated out of other sections of the county 5 cars, making a total of 32 cars. Those shipments have been coming westward. I don't know the destination. Portland, I presume. Conditions are favorable for the increased production of barley in Malheur County. I hardly think there will be markets in California for increased production of barley, because California is a large exporting State in barley. They are producing a large quantity of barley for European malt trade, so California would not provide us a barley market. Barley produced in Malheur County could come into the Willamette Valley for local consumption, and perhaps a considerable quantity of it could go to these Pacific coast ports for exportation. (934.) It could if we had the tonnage sufficient.

Potatoes: The 1927 shipments out of Vale, Ontario, Nyssa, and Brogan, 91 cars, and estimated out of other sections of the county 50 cars, or total of 141 cars. The soil and climatic conditions in Malheur County are such that we produce what is known as a mid-early potato. Practically all our potatoes are in that class, and potato shipments are taking place from that county at the present time. We have good high yields. Some of the shipments I have set down here have gone west. At the present time Los Angeles—or within the next week the buyers figure that Los Angeles will begin to take some of our potatoes, and I say Los Angeles,
504 because it is the only California market that we really can reach with potatoes from that section. In my judgment, in connection with the construction of the cross-State line, at certain seasons of the year Malheur County would ship (935) a lot of potatoes into California, because our crop comes on at a time when their early crop is cleaned up and the later crop is really not ready for market.

Onions: 1927 shipments out of Vale, Nyssa, Ontario, and Brogan were 47 cars. I didn't estimate any additional cars, because I wasn't familiar.

Prunes: 1927 shipments out of Vale, Ontario, Nyssa, and Brogan, 93 cars. The estimated out of other sections of the county, 45 cars, or a total of 138 cars of prunes, as green prunes. There were no dried prunes shipped out of that section. Those prunes are being diverted to wherever the market will take them. Most of them are going east. I don't believe that any of them have come west.

Apples: 1927 shipments out of Vale, Ontario, Nyssa, and Brogan were 215 cars, and estimated out of other sections of the county 350 cars, or a total of 565.

Malheur County isn't one of the large apple-producing sections, but we (936) produce from 500 to 750 cars each year, on a comparatively small—on an acreage of about two thousand. Under present conditions those apples practically all move east, although one shipper out of that section made the statement to me that if he were able to reach California markets readily he believed that fully fifty per cent of his shipments would go to California, and he ships 750 to a thousand cars of apples each year.

Poultry: 1927 shipments, estimated, 3 cars, and that was practically all dressed turkeys.

505 I don't know whether they came west or not. I do know, though, that the California market was about five to eight cents a pound higher than was the eastern market, so there would have been a very good opportunity for them if they could have shipped there. Conditions in Malheur County are suitable for sustaining an extensive poultry industry.

Seed, clover and alfalfa: In 1927, shipments out of Vale, Ontario, and Nyssa amounted to 16 cars, and estimated out of other sections 5 cars, or 21 (937) cars as a total, and this production is increasing very rapidly. Our acreage is growing by leaps and bounds. There is a possibility that a good deal of our alfalfa seed may come into western Oregon, due to the fact that we are producing and certifying a considerable acreage of Grimm alfalfa. It is about the nearest Grimm alfalfa producing section to Willamette Valley points, and Willamette Valley growers are fully convinced that they must use Grimm alfalfa, so that that feed should come west. Our weevil we have had with us, it is sort of like an attack of smallpox, I guess, the weevil doesn't seem to bother us any more. This last spring Mr. H. H. Witherspoon, horticultural commissioner in that section of the State, spent a day with me in the alfalfa fields of Malheur County, trying to locate a weevil if he could. He was unable to locate a weevil, but he did find a considerable number of the parasitic fly, and he made the statement to me that as far as he was concerned he was going to recommend to the board of horticultural commissioners that the quarantine be lifted. Of course, that would depend on the

action of the rest of the board. His recommendation was, though, to remove the quarantine. (938.)

506 That parasitic fly was introduced in Malheur County in 1921 or '22 first, and now it can be located in almost any of the alfalfa sections where you can't locate a weevil. I can't say that I have been unable to find one. I have found a very, very few in isolated sections of the county, where perhaps the fly hadn't had a chance to penetrate. There were a few in one section. You can prove very readily that this parasitic fly has controlled the weevil infestation and practically eliminated it in Malheur County if you will go into the alfalfa sections. Where it is possible to find a weevil at all you will find upon examination of the larva of that weevil that each of them contain underneath their body, in the belly portion of the what you might call the body, the tiny worm, possibly a thirty-second of an inch in length. Now, that worm is the larva of the egg from this parasitic fly, or the ichneumon fly, and every larva of the weevil contains the worm of this fly in it. That means the weevil larva will never mature. When the larva goes into its cocoon preparatory to its coming out of the weevil, instead of an alfalfa weevil coming (939) out the ichneumon fly will come out. If Mr. Witherspoon's recommendation has any influence with the board—and he is one of the oldest members of the board—the quarantine against Malheur produced alfalfa hay should be lifted within the very next few short term of years.

Peaches and pears: Out of Brogan, Nyssa, and Ontario last year, four cars of peaches and pears were shipped.

Honey: There were two cars of honey shipped out of Vale in 1927, making a total out of the county, actually shipped, of 2,577 cars of agricultural produce.

Now, to continue with my general statement:

507 The above estimate of 1927 shipments represents an average year, and is based on actual shipments and estimates, using as a basis the figures of the Department of Agricultural Economics of the United States Department of Agriculture in their report on agricultural production in 1927.

It is estimated that approximately fifty per cent, or (940) about 1,250 cars, of these products are now moving over circuitous routes to western markets. When I say "circuitous routes" I mean they go south, I presume, to Ogden and across to Los Angeles. I don't know that anything has ever been taken over that road—I believe it is called the Rogerson-Wells cut-off—I don't know of anything that ever was taken across there from that section. If it goes to Portland or to cities north of Portland in the northwest, it goes 175 miles north before it ever starts traveling westward. I mean on the Union Pacific main line through Baker and Pendleton and then down the Columbia River. That is what I would call a circuitous route. I mean that there is at the present time no direct outlet, rail outlet, for the products of Malheur County, either to the north Pacific coast or the south Pacific coast.

It is an undisputed fact that these markets are developing rapidly and that if they were more easily accessible a larger portion would go to them. (941.)

California alone has increased her consumption of imported beef by 32 per cent in the five years, 1922 to 1926, inclusive, and her consumption of imported sheep by 26 per cent in the three years, 1924 to 1926, inclusive. The expansion that has taken place in the consumption of meat commodities is practically paralled by the consumption of other agricultural commodities.

508 Now, the next item I have taken up is the development of Malheur County agriculture to be expected with the completion of the Owyhee and Vale projects.

The Owyhee project:

The Owyhee project now under construction by the Federal Reclamation Service will irrigate approximately 80,960 acres of new lands. Approximately 56,400 acres of these new lands lie in Malheur County, Oregon. The balance of 24,500 acres lies in Idaho adjacent to Malheur County.

Additional water will also be supplied to 31,366 acres of land in Malheur County now being partially watered, and will increase the productiveness of it.

Work has already started on this project and it will no doubt be completed within a period of five or six years.

The quality of this new land is equal to, or better than, the lands now under irrigation and it is all adapted to an intensified type of farming which will produce large tonnages of exportable commodities. (942.)

In Malheur County the policy of one-crop farming is not generally followed. That practice is rapidly being abandoned, and our farmers are going into a diversified type of farming in which they employ rotation of the various crops. Alfalfa hay might be called our basis crop. Red clover is becoming a very important crop. In fact, our alfalfa hay is being decreased with the increase of red clover. We also grow corn, we grow potatoes, we grow letture, we grow onions, wheat, barley, oats—in fact, we will grow any crop that can be raised in, you might say, under any conditions excepting tropical ones. We have a very wide range of crop selection.

509 It has been my experience that these irrigated lands in Malheur County have not been devoted year after year to the production of the same crop. They are diversifying their farming. In my judgment that is a better and more profitable policy for a farmer to follow than the cropping of his lands year after year to the same crop. That was demonstrated about 1920. At that time (943) our county over there was producing practically nothing but alfalfa hay. They had been getting $15.00 to $20.00 a ton for their hay, and their price dropped to where they couldn't even get an offer of two and a half or three, and the county was broke for four or five years as result of it, and since they have taken up the diversified

type of farming the conditions have improved, and are continuing to improve.

The Vale project is another Federal Reclamation Service project. Work on this project has advanced to the stage that there is little doubt but that it will be completed by 1930, and this project will add twenty-four thousand seven hundred eighty acres of new irrigated lands to our acreage now under irrigation in Malheur County.

Then I have made an estimation of the probable tonnage with the development of the Vale and the Owyhee projects.

When these two projects are completed there will have been added to the present irrigated area of Malheur County alone approximately 82,000 acres.

This acreage of new land and the supplemental water provided for lands now inadequately watered should more than (944) double the agricultural production of the County.

It is difficult to estimate what utilization will be made of
510 these new lands, but economic surveys have shown that a reasonable utilization would be on about the following basis on the average farm on these projects.

Taking up the crop percentage devoted to the crop, and the acreage figured on the total acreage.

Alfalfa, 32.5 per cent of acreage in total crop, or 26,650.

Red clover, 10 per cent, or a total acreage of 8,200.

Pasture, 10 per cent, or a total acreage of 8,200.

Wheat, 20 per cent, or a total acreage of 16,400. (945.)

Corn, 7.5 per cent, or a total acrage of 6,150; barley, 12.5 per cent, or a total acreage of 10,250; potatoes, 5 per cent, or a total acreage of 4,100; buildings, fences, roadways, and other improvements, 2.5 per cent, or an acreage of 2,050; making a total of 100 per cent, or the 82,000 acres.

They have been producing some corn in Malheur County almost since the first irrigation work was done in there. They have been producing corn for years, but not on an extensive scale. The acreage planted to corn is increasing and we believe that it can be increased very heavily and still be an economically sound crop for them to grow. In my judgment, the growing and increased production of corn in Malheur County is feasible. We have a growing season of 150 to 180 days, which is sufficiently long to mature corn and mature it properly. At the present time we have—I would not try to estimate how many acres of corn in the county, but the growers of all of this (946) corn are realizing yields of 75 and 100 and 125 bushels per acre in many cases.

I was born in Iowa and lived there the first nineteen years of my life. As to how the yield of corn in Malheur County
511 compares with tat in Iowa an dother various States at the present time, I have forgotten the figures, but it seems to me between 35 and 40 bushels is the average production per acre for the State of Iowa. I would not state that figure definitely, however. As to the possibilities for markets of corn produced in Malheur

County, Portland, last year, according to the grain inspection service, received 963 cars of corn from Argentina, the States of Minnesota, Omaha, Nebraska, and various other Corn Belt States. Malheur County is producing now corn of a variety and quality suitable to satisfy the requirements of the Portland and Pacific coast markets. Last year a sample of corn selected by myself and the secretary of the chamber of commerce at Ontario, Mr. Doolittle, a sample of this corn was sent to one of the Portland mills for a statement from them as to what they considered the quality to be. That was a cereal mill at Portland. (947.) I believe it was Albers Brothers; I am not sure. They stated in a letter back to us that that corn compared very favorably in all respects with the corn from Nebraska, Minnesota, and Iowa. There is a substantial demand for corn in western Oregon outside of Portland. They use corn in practically all the different poultry feeding rations, and our poultry industry on the Pacific coast is growing rapidly. They are using large amounts of corn for that one thing. A large amount is being used for human consumption, and our populations we believe are increasing all the time. Western Washington and California should consume considerably more corn, or as much at least as western Oregon does, because their poultry industry alone is as large or larger than the Oregon poultry industry. And also our corn is used in dairy rations. There is a large number of uses to which
512 it can be put. In my judgment there is the opportunity for a largely increased production of corn in Malheur County, with the idea of marketing it in the three Pacific Coast States. To bear out my statements, I might relate an experience with Professor Hyslop, who is head of (948) the farm crops department at the Oregon Agricultural College. He spent last week in Malheur County with me, and while there we looked over corn fields. He had not been in the county for almost five years. He was so impressed with our corn crop and our corn prospects that he insisted that next year his department and I cooperate in putting on a piece of corn work over there and trying out the different varieties, trying to find which is the best variety for our farmers there, and with the intention of stimulating and trying to increase the corn production for the purpose of exportation to the Pacific Coast States, western Oregon and other coast States.

Figuring the utilization of the lands of the Owyhee and Vale projects on this basis there would be produced on these lands a tonnage as follows:

Hay: 26,650 acres of alfalfa producing 5 tons per acre, 133,250 tons; 8,200 acres of clover producing 2.4 tons per acre, 19,680 tons.

Wheat: 16,400 acres producing 41.9 bushels per acre, 20,615 tons.

Corn: 6,150 acres producing 59.7 bushels per acre, 10,280 tons.

Barley: 10,250 acres producing 48.1 bushels per acre, 9,832 tons. (949.)

Potatoes: 2,050 acres producing 270.5 bushels per acre, 16,635 tons.

Clover seed: 8,200 acres producing 5.4 bushels per acre, 1,328 tons.

513 Or a total of 211,620 tons of agricultural commodities that will be produced annually. This tonnage would be either shipped direct to market, or used to produce more concentrated products for shipment. The latter course is more economically sound and no doubt will be the practice followed. If livestock is utilized to concentrate the feeds produced, the production of these new lands will be sent to market in the form of hogs, butterfat, and beef. All of these commodities will be absorbed by western markets and will provide tonnage for a railroad across central Oregon.

On these new lands there will doubtless be a surplus of alfalfa hay produced for several years. This surplus hay will readily be absorbed by western Oregon counties which are badly in need of legume hays for the maintenance of their dairies.

The Owyhee and Vale projects together with lands at present under irrigation do not represent all the agricultural development that may be expected from Malheur County. Much of the present irrigated area is now in large hay ranches that will eventually be broken up into smaller farms with consequently larger production. This movement has already started. (950.)

An example of this is in the Harper section where one of these large hay ranches is now being farmed by 31 families, producing practically as much hay as the ranch originally produced, and in addition it is estimated they will ship fifty cars of wheat this season.

The Brogan section is at the present time arranging for more water which will increase their production greatly. The Westfall section has 4,000 acres yet to be irrigated. The Jordan Valley

514 project has another 9,500 acres to be irrigated. The Warm Springs project has 4,000 acres to be brought under irrigation.

The irrigated lands of Malheur County may be expected to develop into a section comparable to the Yakima Valley in Washington and the Twin Falls section in Idaho. Both of these projects are outstanding examples of western irrigation, but have no more, if as many, natural advantages. The bench lands on these new projects are ideal fruit lands and a considerable acreage may go into fruit, with a resultant heavy tonnage for export.

This section is also one of the few regions adapted to corn production. Yields of 100 bushels of corn per acre are quite common and there is no reason to believe that Malheur County may not produce the corn requirements of the Pacific coast in so far as acreage available will permit. Oregon alone of the Pacific Coast States imported 963 carloads of corn in (951) the 1926–27 season. This would amount to the production of 11,534 acres at the average yield of 59.7 bushels per acre in Malheur County.

It is only reasonable to expect that these lands will within a comparatively few years be producing the tonnages as estimated in this review. Land settlement policies are improving, and there is a de-

sire for these lands as is manifest from the volume of inquiries received from all parts of the United States by the local chambers of commerce, and the county agricultural agent's office. Many people are already coming in prepared to buy lands even though they know it will be a few years before some of this land will receive water. Many of these people are buying lands and are set-
515 tling here waiting for the new lands to become available.

As to the effect so far as Malheur County is concerned of the construction and operation of this cross-State line, as I stated in my summing up of the situation in my paper, we should develop into a section which is comparable to Twin Falls or Yakima. We have more natural advantages than they have. We have a longer growing season. We have better soil conditions, and we will have, when the Owyhee and Vale projects are completed, as good or better water supply. (952.)

Those sections no doubt at the time the irrigation project was started in there looked like vast desert wastes, and a good deal of our country looks the same way to-day, but I believe with a little vision on the part of a person viewing that country they can't help but seeing sections of the country such as our other prosperous and permanently settled irrigation projects. The Yakima sections and the Twin Falls sections now are and have been served for considerable time in the past with adequate rail transportation. I can't say as to when that transportation was provided them, but they seem to be pretty well covered by railroads. Twin Falls is not included in that statement quite so well as some of the other projects. I believe the statement could be truthfully made that both the Twin Falls and Yakima sections have better rail outlets to consuming markets than Malheur County has at the present time.

I do not believe that Malheur County and that section of the State of Oregon ever can realize a proper measure of development of its resources from the construction and (953) completion of irri-
516 gation projects alone without the providing of additional transportation facilities for the expeditious reaching of markets for the products of Malheur County. And our western markets are going to be and are becoming right now one of our important outlets for the class of commodity which we are prepared to raise on these new projects. The views I have expressed here represent the sentiments of the county court of Malheur County and of the people of Malheur County generally.

I was not here when Mr. Teutsch testified. My estimates of utilization from the Owyhee and Vale projects are about four times in tonnage that of Mr. Teutsch's. I have seen his testimony in brief form. He has figured his tonnage reduced to livestock products, which I state might be done. I haven't gone into it to that extent. And that would explain the difference there. He has reduced it in terms of beef, hogs, sheep. I have simply carried it out as crop tonnages. (954.)

On hay I have 133,000 tons of alfalfa and Mr. Teutsch only uses some 11,000 tons. He has taken his figures, I presume, on a little different basis than I have. I, in my figures, did not attempt to segregate the items into their various uses; I simply prepared them in a general way, or in totals. Now he has estimated in there that on these farms there will be a certain amount of this hay that will be utilized for the production of butterfat and the production of beef, leaving only a portion of the total prduction available as hay tonnage, and he has worked it out on a different basis than I have worked it out. That is the reason our figures are different. If our figures were reduced to the same final terms I believe our figures would coincide pretty closely.

517 Cross-examination:

I am giving the entire production as near as I can estimate it for the present time; and I have used 1927 as a year to base my estimates upon because I believe it was an average year. (955.)

Exam. ROGERS. By the entire production you mean entire production in Malheur County?

A. No; I don't mean production either; I mean shipments. These figures I give are actual carload shipments that went out of there. Of course production figures are different, because a lot of that produce was used at home in feeding livestock and things of that sort.

Q. (By Mr. SPENCER.) Well, you estimate that the volume of the shipments that move out of there from increase in production; you don't mean you have gone to the railroad stations and got the number of cars that move out?

A. For 1927 I did; yes.

Q. Well, but your general statement there of beef production, and alfalfa production, and grain production——

A. No, I didn't.

Q. And dairy production, and dairy products production, are all estimated from your knowledge of the situation there, are they not?

A. That is the case with hogs, sheep, and beef cattle. The other is an estimation of shipments out of sections not covered by the freight offices in Malheur County. Now Malheur County, as I said a while ago, is drawn upon by Weiser, Payette, Fruitland, Palmer, Caldwell, all draw upon Malheur County, so that it is hard to get definite figures as to the amount of stuff that goes out. (956.)

Q. And you have made those estimates?

518 A. I have made those estimates.

And that is the entire production in shipments in all directions whether it is to California, to north Pacific coast, or east, or south, or elsewhere. Twenty-seven hundred and some cars, yes, were shipped out last year.

As to whether I have undertaken to analyze where those cars go, whether down to Los Angeles, or here, to Seattle, or Spokane, or to Denver, or Missouri River, or east, I state in my testimony here that

I estimate that 50 per cent of this is moving westward and I have reached those figures by talking with shippers of livestock, fruits, grains, and things of that sort.

As to whether I am not satisfied that the railroad there that serves this country at Vale and Ontario and these other shipping points that I mention, whether it does not give me adequate service, I didn't say it didn't give us adequate service. It gives us service in so far as cars are concerned. (957.) Its employees are courteous, and we get all the service possible, considering the present locations of these railroads.

Q. Yes; it is located wrong, though, to get to the coast?

A. It is located wrong for our conditions there.

Q. Sure. And it should have a shorter route from Portland to Seattle; is that right?

A. Well, that is not particularly essential. This other road, this proposed road would shorten our route. We are not complaining particularly about our Portland route. It is a little out of the way but we can get along with that very nicely, as far as the north coast is concerned.

Payette is 3½ miles north and east of Ontario on the same railroad, the Oregon Short Line, on the main line. (958.)

Fruitland is about a mile across the river from Ontario on the Payette Valley branch. Palmer is on the Oregon Short
519 Line east and a little south of Ontario. Weiser is east and north of Ontario about 17 miles on the main line. Nampa is south and east of Ontario on the main line. So is Caldwell.

Comparing the distance from Ontario to Portland via the present route of the Oregon Short Line and the Oregon-Washington Railroad & Navigation Company with the distance by way of the cross-State line, Crescent Lake, and the Southern Pacific into Portland, as I remember those figures there is a difference of between 25 and 50 miles in all in favor of the proposed line. (959.)

Q. Now have you been as careful in estimating those distances as you were in the preparation of your estimates of production here?

A. I have not, because I figured that that was more the work of men who were familiar with that type of railroad business. I was trying to figure agricultural production as an agricultural man.

Q. Yes; but you have been here for an hour and a half telling us the advantages of the cross-State line and you have based that advantage on distance alone, haven't you?

A. No; I don't think that I have.

Q. Well; you would not use it if it was a more circuitous and longer route and an inferior route as compared with the present route, would you?

A. I figure that our need for this cross-State line is brought about by the fact that we cannot reach northern California and central California points without making an extremely long and hard trip out of it. Livestock could not be shipped that far successfully.

Q. But you said definitely and positively, in answer to leading and suggesting questions by counsel, that this route from Ontario to Portland was not a direct route and that it was circuitous and out of the way, and that the cross-State line was a
520 shorter route. Now is that the way you want to be understood now? (960.)

Mr. McCULLOCH. I object to that question because it is based on nothing that I said of the kind, and I don't think the witness ought to be asked to answer a question based on an incorrect assumption.

Mr. SPENCER. You said, "You haven't got a direct route now to the northwest." That is just what you said.

Q. Now what is the mileage from Ontario to Portland on the Oregon Short Line and the O.-W. R. & N.?

A. It is about 420 or 430 miles.

Q. 432 miles, to be exact, isn't it?

A. Very nearly that. I don't know positively.

Q. Yes. And all of these towns that we have mentioned here are east of the junction at Ontario and have got to go to that junction, whether they go via the cross-State line or via the present route; isn't that true?

A. Well, there would be a few miles, although, if we had these loading points in Malheur County, or if we had this cross-State line, most of this product could be hauled to Ontario just as easily as it could be hauled to Weiser, Payette, and these other points. The distance is about the same in most cases.

Q. Sure. You mean it could be hauled from the field of production to Ontario? (961.)

A. To Ontario.

Q. But the point I am asking is that Ontario is the place to compute the distance for all of these shipments, whether it is from any of these other towns or whether it is from Ontario?

A. Well, we were computing them from Malheur County. The Snake River Valley there—the total distance is not over 25 or 30 miles from north to south, so the total distance of the variation is not much one way or the other, and Ontario is about
521 the center.

It is 126 or 127 miles from Ontario to Crane. From Crane to Crescent Lake via the proposed route is 173 miles, if I remember those figures. That is the old Odell Junction. Figure 16 miles on top of that, making the distance 189 miles. I can not state definitely the exact mileage from Crescent to Eugene but the distance must be close to 96 miles. (962.) From Eugene to Portland it is about 120 miles; possibly 124.

Q. Now that would make a total of 536 miles from Ontario to Portland via the cross-State line and 432 miles via the present route, or a difference in distance alone of 104 miles.

A. We don't have any diverting chance, though, until we get to Portland.

Q. But you said that the present route was not a direct route to the Pacific northwest markets?

A. It is not so direct to the Willamette Valley points, such as Eugene and over into Marshfield and places of that sort, which will use a lot of our product. When I speak of western Oregon, or the northwest, or the Pacific coast, I mean all of western Oregon, not just Portland.

Exam. ROGERS. Let me ask you this, Mr. Larson: Are you urging the cross-State line in order to reach Portland and north of Portland?

A. Not particularly north of Portland. (963.) I think that if we had the cross-State line to get into western Oregon that it would give us the opportunity to divert north or south. We could go to Portland if we liked; we could go to San Francisco, if we liked. It would give us an opportunity to get either way. As it is now we don't have that opportunity at all.

Q. Well, you would expect to pay higher rates for this additional mileage, wouldn't you?

A. That would depend entirely upon what rates were made.

522 We are not going into that.

Q. You haven't gone into that either?

A. I don't think that this case is going into that at all. I don't think this hearing is going into that question. The rates have not been brought up.

Q. Now would you move any wheat or potatoes, or other stable products that stand up under shipment, by way of the cross-State line to San Francisco if the combination with the water from Portland made a lower rate?

A. We are shipping some potatoes to California now.

Q. How are you shipping them?

A. They are going down through Ogden, I presume, over to Los Angeles.

Q. Do you know?

A. I know they are going to Los Angeles; I don't know exactly which route they are taking, but I have never heard of them using that Rogerson-Wells cut-off. They may. (964.)

Los Angeles really is the California market that we use and do business with under the present conditions. And Twin Falls are also using Los Angeles to a certain extent. I know that the railroad from Rogerson to Wells is there, and there is a service I understand of about two or three trains a week, of a combination train.

Speaking of shipping alfalfa hay over into western Oregon that would be used for dairy cattle largely, whether as a matter of fact the dairy cattle are being shipped from Lane County over to my county now, I do not know that that is taking place at all. (965.) There may be a little of that but I doubt it. I don't think they would be shipping dairy herds from western Oregon to us and we shipping the alfalfa to western Oregon so that those two articles would pass enroute; I don't think that would take place.

523 Q. No; I notice here on page 15 of Mr. Teutsch's exhibit he has got 40 cars of alfalfa hay moving to Lane County, and he has got 66 cars or 700 head of dairy stock. Now are they going in the same direction or in opposite directions?

A. Well, that 66 cars of dairy stock, what is becoming of it? Where is it going?

Q. I am asking you that.

A. Well, you said that he has that. You don't state where it is being shipped or whether it is in or out.

Q. He said Lane County estimate of present agricultural tonnage. He has given the tonnage from the eastern counties.

A. Yes, sir.

Q. Now are you going to ship dairy cows into western Oregon?

A. Not for a good many years to come; no.

Q. Is western Oregon going to ship dairy cows into your country? (966.)

A. In a limited number. In a limited number. They will possibly ship a few in there.

Q. As a matter of fact, the dairy herds of western Oregon have shrunk in the last few years, haven't they?

A. They might have shrunk slightly during the last two or three years, due to disease and some other causes.

Q. No; from the sale to California buyers?

A. Well, some of that has been diseased stock that has gone to California buyers.

Q. Isn't it true, to your knowledge, that there has been a real invasion and purchase at high prices in western Oregon, of dairy stock, by California dairy people and by southern Idaho dairy people?

A. There is a lot of dairy stuff being bought by California all right.

Q. Now you asked me whether the 66 cars were going east or west. Mr. Newell classifies them as going east, eastbound, on
524 page 124 of his Exhibit 16, but you don't think they will be going over there, do you?

A. That is dairy cows you are speaking of now?

Q. Yes; 700 head the first year of operation.

A. That is, out of Willamette Valley points and going eastward?

Q. Yes.

A. Well, we are developing over in our country; all of that eastern Oregon country is developing, as far as the dairy industry is concerned. (967.) Now, from 1920 to the present time we have more than doubled, and we can still use more cows over there, and possibly there will be some cows sent to us. But western Oregon has got, I believe, a surplus of dairy stuff. They won't shrink in numbers but very little.

Q. They are short now, aren't they?

A. Well, they are possibly not quite up to their standard, but they are short principally because of the fact that they can not get, at the present time, satisfactory feeds at a price which will enable them to compete with sections that are growing their own feeds right on the ground. If they can buy alfalfa hay cheap enough the chances are that they won't shrink any more.

Q. You were speaking of the Yakima country and its prosperity; it has perhaps been the most marked of any irrigation district in the west, has it not?

A. Well, their development has been——

Q. That is what I mean.

A. I don't know as to the actual prosperity of the individuals on the project.

Q. Now they stayed with fruit primarily at first, didn't they?

A. Yes; they produced lots of fruit.

Q. And then developed and expanded into dairy production and other diversified production?

525 A. They are shipping quite a number of different commodities at the present time in rather large amounts. (968.)

Q. Yes. They are 165 or 170 miles from the Seattle market, aren't they?

A. I don't know the distance in there.

Q. And they are about 315 or 320 miles from the Portland market?

A. I would presume that would be about right; approximately so, anyhow.

Whether it is a fact that train operations into Ontario from Portland are accomplished in substantially the same or less time from Portland than they are to Yakima, although the distance is greater, that is true in regard to passenger service. Passenger service is about 14 hours from Ontario to Portland.

Our fruit stuff goes east and most of our cattle comes west and goes to Los Angeles. (969.)

Q. But you have and enjoy an extensive district that has made remarkable growth the last seven or eight years, hasn't it, since you have gotten into this dairy production and diversified farming? Is that right?

A. The country has developed during the last few years, not extremely rapidly, but it has developed.

Q. And it is just served by the main line and branch lines of railroads and has been for several years; isn't that true?

A. It is served by the line running from Ontario to Crane, and one or two other small branches, and the main line; yes. Our lines are all restricted right to a small location, you might say, right in the center of the Snake River Valley. It runs along the eastern portion of the county.

Q. You have the line from Erb along the south bank of the Snake River, adjoining the main line at Nyssa, which is near

526 the junction of the Burns branch, called the Oregon eastern branch, don't you?

523 Q. No; I notice here on page 15 of Mr. Teutsch's exhibit he has got 40 cars of alfalfa hay moving to Lane County, and he has got 66 cars or 700 head of dairy stock. Now are they going in the same direction or in opposite directions?

A. Well, that 66 cars of dairy stock, what is becoming of it? Where is it going?

Q. I am asking you that.

A. Well, you said that he has that. You don't state where it is being shipped or whether it is in or out.

Q. He said Lane County estimate of present agricultural tonnage. He has given the tonnage from the eastern counties.

A. Yes, sir.

Q. Now are you going to ship dairy cows into western Oregon?

A. Not for a good many years to come; no.

Q. Is western Oregon going to ship dairy cows into your country? (966.)

A. In a limited number. In a limited number. They will possibly ship a few in there.

Q. As a matter of fact, the dairy herds of western Oregon have shrunk in the last few years, haven't they?

A. They might have shrunk slightly during the last two or three years, due to disease and some other causes.

Q. No; from the sale to California buyers?

A. Well, some of that has been diseased stock that has gone to California buyers.

Q. Isn't it true, to your knowledge, that there has been a real invasion and purchase at high prices in western Oregon, of dairy stock, by California dairy people and by southern Idaho dairy people?

A. There is a lot of dairy stuff being bought by California all right.

Q. Now you asked me whether the 66 cars were going east or west. Mr. Newell classifies them as going east, eastbound, on
524 page 124 of his Exhibit 16, but you don't think they will be going over there, do you?

A. That is dairy cows you are speaking of now?

Q. Yes; 700 head the first year of operation.

A. That is, out of Willamette Valley points and going eastward?

Q. Yes.

A. Well, we are developing over in our country; all of that eastern Oregon country is developing, as far as the dairy industry is concerned. (967.) Now, from 1920 to the present time we have more than doubled, and we can still use more cows over there, and possibly there will be some cows sent to us. But western Oregon has got, I believe, a surplus of dairy stuff. They won't shrink in numbers but very little.

Q. They are short now, aren't they?

A. Well, they are possibly not quite up to their standard, but they are short principally because of the fact that they can not get, at the present time, satisfactory feeds at a price which will enable them to compete with sections that are growing their own feeds right on the ground. If they can buy alfalfa hay cheap enough the chances are that they won't shrink any more.

Q. You were speaking of the Yakima country and its prosperity; it has perhaps been the most marked of any irrigation district in the west, has it not?

A. Well, their development has been——

Q. That is what I mean.

A. I don't know as to the actual prosperity of the individuals on the project.

Q. Now they stayed with fruit primarily at first, didn't they?

A. Yes; they produced lots of fruit.

Q. And then developed and expanded into dairy production and other diversified production?

525 A. They are shipping quite a number of different commodities at the present time in rather large amounts. (968.)

Q. Yes. They are 165 or 170 miles from the Seattle market, aren't they?

A. I don't know the distance in there.

Q. And they are about 315 or 320 miles from the Portland market?

A. I would presume that would be about right; approximately so, anyhow.

Whether it is a fact that train operations into Ontario from Portland are accomplished in substantially the same or less time from Portland than they are to Yakima, although the distance is greater, that is true in regard to passenger service. Passenger service is about 14 hours from Ontario to Portland.

Our fruit stuff goes east and most of our cattle comes west and goes to Los Angeles. (969.)

Q. But you have and enjoy an extensive district that has made remarkable growth the last seven or eight years, hasn't it, since you have gotten into this dairy production and diversified farming? Is that right?

A. The country has developed during the last few years, not extremely rapidly, but it has developed.

Q. And it is just served by the main line and branch lines of railroads and has been for several years; isn't that true?

A. It is served by the line running from Ontario to Crane, and one or two other small branches, and the main line; yes. Our lines are all restricted right to a small location, you might say, right in the center of the Snake River Valley. It runs along the eastern portion of the county.

Q. You have the line from Erb along the south bank of the Snake River, adjoining the main line at Nyssa, which is near

526 the junction of the Burns branch, called the Oregon eastern branch, don't you?

A. Well, that is what they call the Homedale branch?

Q. Yes.

A. Well, that runs along the extreme eastern boundary of the county for ten or fifteen miles; that is, in the county. It goes on, of course, south into Idaho points, but in Malheur County it has about ten or fifteen miles of trackage. (970.)

Q. Well, it is a branch that comes into Malheur County?

A. Yes.

And it goes out into the country about 35 or 40 miles. The McCall branch going down to Nampa in that same territory does not affect us. That is entirely over in Idaho and I don't know what there trackage is or their conditions. (971.)

We don't object to doing business with Idaho, and Idaho does business with us, and there is a railroad across there from Payette to Emmett. I have not heard of the Rogerson-Wells line being used. Perhaps it is being used to some extent.

The crop yields that I gave here are contained in our reports and they have been published in newspaper literature. They have been used in a number of different studies. As county agent I report them to Corvalis. They cover the year 1925.

The Willow Creek project that I mentioned is up on the Brogan branch in towards Brogan. (972.) As to whether I advise anyone to go up there and settle on that, it is a very good country for its uses. They are short on water now but they are at the present time making arrangements to secure an additional supply, which will make a good country out of it.

Those figures, 27,000 acres, I took from the State engineer.

I don't think it is entirely correct to say there were less
527 than 4,000 acres that could be watered in there. I think there is possibly around 4,000 acres that are, you might say, developed. The remainder of this land is producing alfalfa hay, wild hay, and crops of that sort. Practically that entire valley is being farmed from Brogan to Vale, but very little of it is producing fruit. (973.) I go through there every few days. The large orchard up there on the Westfall above the Jamieson was abandoned due to the fact that due to litigation their water was taken from them and used on other lands. We have fully as much orchard as that and good producing orchards in the Brogan country, seven miles above it. They are producing good crops of fruit with a limited water supply.

Q. Now as I understand your testimony, you are representing here, taking it from the State engineer, that 27,000 acres can be watered and irrigated from the waters of Willow Creek?

A. It has been estimated that they can do that, yes.

Q. How many years ago was that estimate made?

A. A few years back. The estimate I have here, the report I have here, is 1924 and '26. (974.)

Q. Well, you know it is a fraud, don't you?

A. Well, I would not say it is a fraud.

Q. What is the Warm Springs? Do you advise anybody to go on to Warm Springs and settle?

A. They have some very good land on that project, and there are very prosperous ranchers on it to-day. (975.)

The waters of Willow Creek are partially impounded by a dam up there but not entirely. There is a lot of land on Willow Creek being irrigated and raising alfalfa hay and other types of hay that are above the dam site; still it is Willow Creek water. This
528 Willow Creek runs from in above Ironside, makes a big turn down around through, comes in behind Brogan, waters land there, and from Brogan almost down to Vale. A lot of this land is not below the dam at all. (976.) It is not irrigated in the sense that term is ordinarily used, as an irrigation project; it is being used as flood waters and used in the production of hay—wild hay like we use in the Harney Valley—most of it is alfalfa hay. There is some wild grass hay among it. That particular territory is not settled and irrigated in the sense that Dr. Mead explains settlement for the Ochoco and Warm Springs or Vale projects. It is settled by stock men who are among some of the most prosperous citizens we have in Malheur County. They have large ranches and they are getting plenty of water for their hay lands, producing their feed, and it is counted as irrigated land in any sort of a study. They feed the hay they produce right in that section.

Q. Now when that project was developed it was developed as a 50,000-acre project, wasn't it?

A. I wasn't there; I don't remember. I don't know about that.

Q. And it is represented as a 27,000-acre project in the report of the State engineer, and you and Mr. Teutsch so represent it, don't you? (977.)

A. I take my figures from the State engineer's report.

Q. Yes. And when you speak of an irrigation project you speak of—you don't speak of a wild hay project, do you?

A. No; not when I speak of an irrigation project. We don't call this a project. We say irrigated from the waters of the Willow Creek.

Q. It has, as a matter of common knowledge, resulted in ruinous loss to people who have gone in there because of shortage of water; isn't that true?

529 A. There was one orchard company abandoned an orchard due to the fact that they were short on water. Seven miles above them there is a large acreage of orchard land producing good crops on a limited water supply, in the Brogan section.

Q. Now you say there have been some shipments of lambs from the northern part of Lake County down on that branch line railroad to the Southern Pacific and then over to Ogden and then around and back to Ontario; is that right?

A. I was talking over this matter with a man just out of Ontario who feeds lambs and he told me that two years ago he fed a bunch of lambs that came from out in the Silver Lake country. I asked

him, I said, "How did you get them over here?" He said, "They came in by train from Ogden." Now how else could they have come excepting through——

Q. They came in by train from Ogden? (978.)

A. Came by train from Ogden, was his statement. That is all I know about that particular case. They were lambs.

Q. Why didn't they bring them by truck from Silver Lake over there to the Oregon eastern branch?

A. Well, it is quite a job to truck two thousand or three thousand lambs. The roads are not very good for trucking, and it would not be possible to do it successfully. There is not enough trucks in the country over there to haul them out.

Q. There is not an acceptable road, or a moderately fair road?

A. Oh, there is a fair road.

Q. From Silver Lake across to Burns, is there?

A. Yes; there is a fair road through there, but there is not enough trucks in the whole country. You would have to import half of the trucks from the Willamette Valley to get those sheep across.

I would not say those roads are mere trails through the greasewood and alkali flats. They are fairly passable desert roads.

529 (979.) I have never gone from Burns to Bend. I have gone from Burns to Lakeview a number of times and from Burns to John Day and from Silver Lake to Lakeview a number of times. I have traveled that road a number of times in the last few years. There is an automobile stage line from Burns to Bend. I think they have a daily service. They drive a Lincoln car. They also have a stage running from Lakeview to Burns showing that those roads are passable all right. Most of those roads are county roads. Some of them are receiving State aid. What is known as the Central Oregon Highway from Bend to Burns is, I think, designated as a State road. That is approximately 30 miles north of this railroad location.

Q. This corn that you are going to ship out of the Malheur country, do you know how many carloads of corn is shipped into southern Idaho every year? You know there is a substantial volume of shipment from the east into southern Idaho, do you not? (980.)

A. I presume that there may be some come in, although I don't see why they should ship in there necessarily. They simply haven't developed their corn acreage, or they are growing perhaps crops which might bring in more per acre return to them.

We have not reached the point of production where we can supply them as yet. Our sheep men buy their corn for feeding during the February lambing. Our dairymen and poultrymen use a limited quantity of it, too. (981.)

As to whether our people who are engaged in agricultural pursuits in Malheur County are generally prosperous, we have some prosperous farmers. On the whole, I wouldn't say that they were particularly prosperous. As to whether they are suffering from the general depression in agriculture that we hear so much discussion

about, they have been in the last five years, at least, suffering from low prices for the commodity they have grown. They have been able to grow sufficient quantities but they haven't been able to secure the prices they should get for it.

531 Q. And in that situation do you think it is a wise policy to continue this artificial stimulation that we see in these irrigation projects, bringing in more of these wild lands into agricultural condition, with the condition it is in at present?

A. Well, may I ask you whether or not——

Q. I am asking your opinion as to whether you think it is wise——

A. Well, are we building these irrigation projects for use to-day, or are we building them for permanent improvement of this western country? Population, the normal increase in population, is going to consume tremendous quantities of food products within a comparatively few years. We are not building these things for to-day. We are building them for perhaps ten years from now, a lot of them. We are pioneering this country. (982.) At one time railroads were very glad to build into new territory and build across new sections of country to aid in the development of them. They were pioneering, and a lot of our irrigation work to-day is more or less pioneering work. We don't need them to-day, perhaps.

Q. Do you think it is wise, then, for the present generation engaged in agriculture to sacrifice its prosperity and enjoyment of life for another ten years on the expectation that population is some day going to catch up with all of this wild-cat promotion we have had in agricultural lands?

A. Oh, our little project over there, Mr. Dey, doesn't mean a drop in the bucket in the total consumption of food stuffs; it is only a small amount, and as far as the Owyhee and the Vale projects having any effect upon price of food commodities or agricultural commodities there isn't enough of it to even—to even dent the surface.

Q. Well, if your own local people there have been unable to dispose of that which they have raised, and dispose of it at a
532 fair price to enable them to get along comfortably and with fair prosperity, do you think it wise to bring in right around them additional lands?

A. We have men, Mr. Dey, that to-day are farming that land and are making more money off of that land than they could do in any other line of business. They are prosperous. We have outstanding examples. (983.) Our good farmers, those farmers are not doing a thing that any man couldn't do if he had the same mental or perhaps other abilities to carry out the job. They are making money, and it is part of the agricultural college business, my business, to try to get those men lined out on a type of farming that will enable them to produce crops which they can sell at a profit. We can grow our clover seeds, we can grow poultry, we can produce dairy products, a number of things that we can grow right there that can bring a profit to the producer, and as far as talk about hard times, and all of those things, if you will check back a lot of your hard times talks

they are coming from men that perhaps are not using their natural abilities to the fullest extent; they are perhaps weak in some way. We have got prosperous men over there, and some that are not prosperous.

Q. Well, I understand your competent farmers are prosperous.

A. In practically every case our competent farmers are prosperous.

Q. Under the transportation facilities and under every other condition that exists over there.

A. Well, they are producing stuff, but they aren't becoming rich, but they are paying their bills and getting by and coming out at the end of the year in pretty good condition.

Q. And some of them, as you said a little while ago, are making more money than they could in any other line of business? (984.)

A. Well, that is true, perhaps.

533 Exam. ROGERS. We haven't had in this case much about agricultural depression. I rather gathered from the newspaper reports and other reports that there wasn't any such animal. I was just wondering if you were putting a hypothetical question to this witness that wasn't based on the facts?

Mr. DEY. Well, my purpose, Mr. Examiner, is to find out what these experts, county agricultural agents, graduates of our college here, supposed to be the best equipped in the State, think about this proposition of keeping the production ahead of the consumption. And I gathered from the witness' answer that he thinks that is the proper thing to do, to go ahead and bring in more of these irrigation projects.

A. Are we keeping our production ahead of our consumption? Aren't we importing each year quite a quantity of food stuffs in some lines and exporting others? Doesn't the balance come out just about even, when all is said and done?

Q. (By. Mr. DEY.) Well, outside of the construction of the cross-State line, what else have you got to suggest to bring prosperity to people engaged in agriculture in your country?

A. Well, perhaps a different—a little different type of diversified farming, and that is a long, extended subject that I don't know enters into this case particularly. (985.) We have got examples there of men who can farm under present conditions, even, and do it successfully.

Q. Well, the solution of their present difficulties hasn't been dependent wholly upon the construction of the cross-State line, I take it?

A. Oh, not wholly, no.

Redirect examination:

Q. (By Mr. MCCULLOCH.) Mr. Larson, did you want to be understood as contending or claiming here that the products of Malheur County, to Portland and to points nortl. of Portland would

534 go normally or naturally by the cross-State line and thence the Southern Pacific to Portland or beyond Portland, in

preferece to the Oregon-Washington Railroad and Navigation Company line through Huntington and up through Pendleton, and down the Columbia River?

A. Well, I really am not prepared to state just what would take place there. That would be a matter of rate adjustments and other factors which might enter in which I don't feel prepared to testify upon. (986.)

Q. Well, you hadn't investigated, had you, the comparative distances, or were you making any contention that the products of Malheur County that would go to Portland as a market, or Seattle or Tacoma, points north of Portland, would be routed by the cross-State line and Southern Pacific instead of the existing line?

A. No; I have made no such contention as that at all. I believe in my testimony I tried to give the impression that so far as Portland markets were concerned we were being pretty well taken care of, but we are not reaching Eugene, Marshfield, and other central Oregon—central western Oregon points.

Q. And you mentioned, also, did you not, in that connection, northern and central California markets?

A. Northern and central California markets we are not reaching at all.

Large shipments of livestock, sheep, and farm animals are being made eastbound on the Union Pacific branch from Crane to Ontario. Generally speaking, those shipments originate around Crane, Juntura, and Burns. (987.) As to whether any of them come from out of the Fair Valley, tributary of that line from Burns to Seneca, I understand that Grant County is shipping quite a little livestock over that route at the present time.

I have been over a good many times the country west of Burns and Crane to Silver Lake, and then west of Silver Lake over the Christmas Lake and Fort Rock countries, but I have not been over the direct route of the proposed cross-State line.

There is a production of sheep and livestock in northern Lake County and northern Harney County between Burns and Silver Lake and on west. I couldn't say as to the numbers of head that run in there, but I do know that what is commonly called the Fort Rock desert and Sycan Marsh, and the country in northern Harney County, and all through there, supports a large number of both cattle and sheep. Sheep are wintered in northern Lake County. (988.) Practically all of the sheep of Lake County—and Lake County is one of the heavy producing counties in Oregon—practically all of those sheep are wintered out there in what is known as the high desert; they go out there about the middle of September or first of October, as soon as they get rain or a little snow to provide water; those sheep remain there until the water supply is exhausted in the spring, and they then have to move out onto the summer ranges where they have water.

Q. Mr. Larson, in that territory you have just been speaking of west of Burns, the Silver Lake country, Christmas Lake and Fort Rock country, and Sycan Marsh, do you know whether there are supplies of natural forage that sheep and range cattle will eat?

A. There is a supply, and the only reason that they don't utilize more of it is, as I said a while ago, they have no water during the summer months. It is known as the high desert.

Q. Well, do you know whether in that territory where they haven't water in the summer months water is procurable by th drilling of wells?

536 A. It is in the Fort Rock desert, I know.

Q. What do you know about that?

A. Well, I know that in my experience in Lake County I worked considerably with three different ranchers in the Fort Rock desert who have wells that they are pumping from. (989.) Those wells are approximately 200 feet deep, that the water rises within forty feet of the surface of the ground. In one of those wells they have a thin-inturbine pump, which ran 50 days continuously during the year 1925 and never lowered their water a bit. Now, that pumped there a volume of water of about a thousand gallons a minute.

On another well, about three miles from there, a 12-inch centrifugal pump was installed, and that pump had an efficiency of almost 2,000 gallons per minute, and it was run almost continuously, throughout the summer.

Q. (By Mr. McCULLOUGH.) Mr. Larson, do you know whether in that country the water from the wells that have been drilled is used for livestock? That is, does it furnish water for any livestock, sheep?

A. A considerable number of livestock, particularly cattle, is being watered from one or two of these wells. (990.)

Q. For what distance adjacent to a well of this sort would you say it would be feasible to supply cattle or sheep with water?

A. Oh, cattle would come in possibly ten or twelve miles to a central water supply. Sheep would come not quite so far.

Q. In your judgment would the drilling of wells at various points in the country adjacent to the line of the proposed cross-State route, and with the transportation facilities that that would afford for the movement of cattle and sheep out, the movement of farm sup-

537 plies and pay, if necessary, in, could the country tributary to the proposed cross-State line support an extensive livestock and sheep industry?

A. They could support a great deal more than they are at the present time, because, as I stated a while ago, they are limited by water. There is a large amount of natural forage growing on that land which can only be utilized the time of the year when they have water naturally, from snow, rains, and agencies of that sort, and if artificial water were supplied a great deal of that so-called present desert would be supporting livestock throughout twelve months of the year, as it is doing where they have one or two of these wells.

Recross-examination:

Q. (By Mr. SPENCER.) It isn't possible for the Fort Rock country to put water on its lands on any such economical basis as is done over there in your country in the Malheur, is it? (991.)

A. Well, I don't believe that they can pump quite as efficiently or economically as we can apply gravity water. (992.)

538 W. V. WAGNER was thereupon called as a witness on behalf of complainants, and, having first been duly sworn testified as follows:

Direct examination:

I reside at Payette, Idaho. I have been there eight years. I am secretary and general manager of the Farmers' Cooperative Creamery. We have our main plant at Payette, Idaho, with a branch plant at Weiser, a branch plant at Ontario. As manager I have complete charge of the operations of these plants and the selling of our commodities, any other duties that come under the management of the business. (992.)

Our creamery gets its supply for operation from Gem County, Payette County, Washington County, Adams County, in Idaho; Malheur, Baker, and Union Counties in Oregon; seven counties. I am familiar with the conditions in those counties for the production of butter, poultry, and eggs.

As secretary of the Farmers' Cooperative Creamery I am custodian of the files and records of the company. That company was organ- in August, 1915. I have prepared an exhibit for this case showing the development of the Farmers' Cooperative Creamery at Payette and Weiser. The paper you now hand me is the exhibit which I have prepared.

This is in part my exhibit. It simply shows the date of organization of our institution and its growth from that time. We organized in August, 1915, and our operations amounted to (993) practically nothing the balance of the year, so our records really start with the year 1916.

We manufactured in 1916, 200,440 pounds of butter. I estimate we will manufacture in 1928 four million pounds.

Our company had four hundred stockholders in 1916. On July 1st, 1928, we had 3,455 members.

539 (Said statement was thereupon received in evidence, marked "Intervener's Exhibit No. 18, Witness Wagner".)

We market our butter principally in California. We have been shipping practically all our butter to Los Angeles. However, we maintain a selling association in (994) Los Angeles and San Francisco. That association is the Challenge Cream and Butter Association. We sell some butter in San Francisco. In making our shipments from Payette and Weiser our car originates at Weiser, is finished at Payette, and is dispatched over the Union Pacific by way of Salt Lake to Los Angeles. By that way of shipment Weiser gets the credit of the car. I said we sell some butter in San Francisco. (995.)

The proposition is this, we maintain a selling association in each city, and at the present time we are shipping all butter to Los Angeles and it is being stored in Los Angeles and supplied to San Francisco from time to time, in order to equalize the two markets. When we started our branch house in San Francisco it was done for the purpose of equalizing the butter markets between San Francisco and Los Angeles. We had found that the brokers in San Francisco were buying butter from the Middle West, shipping to San Francisco, transferring it by water to Los Angeles, and competing with our butter in Los Angeles, and also making a profit for themselves, on account of the San Francisco market being lower than the Los Angeles market, so our coming into San Francisco was for the purpose of equalizing this market and giving better and more even distribution between the two cities, and the butter that we ship now to Los Angeles a large part of it is being transferred to San
540 Francisco and consumed in San Francisco. We do not ship directly to San Francisco because the warehousing facilities are better at this time at Los Angeles. The rate is the same. Our main house is in Los Angeles.

We are shipping two cars of butter per week regularly. It would amount to 104 cars for the year. I might be one or two cars off there on account of there being possibly more than (996) 52 weeks in some cases in a year. I haven't compiled it for the year, but by the week.

The rate on a carload of butter from Weiser to Los Angeles is $1.66. As far as freight, it depends entirely upon the time of year. During the flush season, those cars are heavier than during the normal season, we will say an average from five to seven hundred dollars per car freight.

We have invested in our creamery plants and machinery in Payette and Weiser $250,000.00.

Our two plants have a capacity for doubling our volume, or, in other words, without further expanding we could manufacture eight million pounds of butter annually.

We have been expanding our creameries at a rapid rate for the past five years. Our production caught up with our capacity at Payette, and it was necessary to build to take care of this increasing production, so we built the plant at Weiser to take care of the north end of our territory.

We have been disposing of our butter in the California markets since the latter part of the year 1921 or beginning of (997) '22. Prior to that time our markets were the East—Philadelphia, Chicago, New York, Boston, and so on.

Our conditions are much better today than they were in 1921, when we were shipping East. From the time we organized in 1916 up to the year 1920 or '21, although we had grown considerably,
541 the advancement or growth was not as pronounced as it has been in the last six years, due to the fact that by shipping east and selling our butter to any one we could, and paying the high freight, we couldn't make the returns to our producers that we have

made since we started our own association in Los Angeles. Since about '22 we started there and have developed this selling medium, and our records show that we have paid more to our producers than they could have gotten elsewhere, which we attribute to being able to sell direct to the dealers at the lowest possible cost, making greater returns to these producers. This statement will reflect something has caused a rapid development in our business, and we attribute this development to being able to sell on the California markets and getting a better price.

The financial condition of our company about the (998) year 1920 was that it was practically insolvent. To-day the assets of our business is about $250,000,000, with absolutely no indebtedness, not a dollar.

I do not think the dairy industry, in my territory would have developed like it has without the California markets. As I have just stated, we attribute this development, this advancement, to the fact that we have maintained our own organization in California, made a saving in freight rates, gotten more for the product, and made greater returns to our producers.

We also deal in poultry and eggs. I can't intelligently give you the volume of poultry and eggs, as we started the poultry and egg business in the middle of the year 1927, and 1928 is incomplete. I couldn't give you the annual business, but I would estimate twenty cars of poultry and ten cars of eggs. That is for the year. (999.)

542 I have made a survey as to the extent of the production of butter fats, eggs and poultry in the district I now get my supply from. The estimated amount of butter that we will manufacture at our Payette and Weiser creameries in 1932 or '3 can only be based upon past records. If we make the same gain in the next five years that we have in the past five, which will run around four hundred per cent increase, we could add that four hundred per cent increase to the present volume. We anticipate a good deal larger business in the next five years than we have had in the past. In fact, we are making arrangements to that end in building these other creameries and expanding.

As to how many carloads of butter we would have for shipment in 1933 that is entirely problematical. As I said, we couldn't base it upon carloads. If we had a high production the year around we would ship big cars, we would ship much larger cars than we are now shipping, but you take the volume for 1928, or four million pounds, there is an increase over 1923 of approximately three million. If we get that same increase (1,000) in the next five years it would naturally mean about seven million pounds of butter we would be putting out.

The future for the poultry and egg business looks very bright. The farmers in that vicinity are going on the diversified plan more and more all the time; they are raising more poultry, producing more eggs, milking more cows, than ever before.

In case the proposed railroad is built I would ship all of this butter over it, if they would haul it, provided the freight rate wasn't any higher than it now is. I would ship over that railroad because of the shorter haul. I don't know exactly what the time would
543 be cut, but we are assuming possibly twenty-four hours. Another reason for shipping over that road is there is a saving to us with regard to quality. The quicker we can put our commodity on the market the better the quality. The better the quality, the higher the price we get, the greater returns we can make to our producers. Such is the case particularly with poultry. For example, a shipment of live poultry is quite an item where twenty-four hours could be saved, (1001)—there is less shrinkage on the poultry, less feed en route, less time for the carman, and so forth. Also, we feel that we could effect a saving in refrigeration by the northern route instead of the southern. At the present time, it is costing us $55.00 per car to refrigerate to Los Angeles. That is on the basis of the cost of ice, $55.00 flat charge. That contemplates movement via Salt Lake. At present we ship all of our butter via Salt Lake.

Now, as stated, we are compelled to refrigerate the year around where butter goes over the southern route, because you can't depend on the conditions across the desert from Salt Lake to Los Angeles. There would be times this other way when we would only ice at the point of origin and wouldn't re-ice in transit. That would be a saving of twenty per cent on the icing charges. In the winter time we wouldn't ice at all on butter cars, we would ship entirely without refrigeration, if it could go the Northern route. Those savings, practically all (1002), would affect us, betterment of quality, quicker time, quicker returns on our products, and saving in refrigeration charges, and so forth. Those savings or charges would accrue to the benefit of the farmers or the dairymen. Our organization is purely a cooperative organization. We return everything that is real-
544 ized between the sale of our product, after deducting expenses, to the producers. That is one reason of our success. Our farmers have confidence, they know that they are getting all this and that feature has built up our business.

As manager of the Farmers' Cooperative Creamery at Payette, I am interested in the construction and operation of the proposed railroad, requested in the petition of the Public Service Commission of Oregon, for the reason that I am representing 3,455 dairymen in that section of the country—that section of southwestern Idaho and eastern Oregon who are demanding an outlet of some nature to the northern California markets. These people feel that they are isolated with regard to rail transportation for northern (1003) California, and they are to a great extent. We have often pictured our position geographically with western Kansas or eastern Colorado, that is, with respect to rail transportation to northern California. For example, if we were to cut the Union Pacific line in two at Payette, Idaho, and swing it around east of Salt Lake City it would reach out to a point in Colorado or possibly western Kansas, or in

that section of the territory, so we feel that that is our position, geographical position, with respect to northern California markets. We have no outlet to northern California whatever except around by Ogden. We are between four hundred and five hundred miles to Ogden, and no closer to San Francisco, possibly a little farther away, than when we started.

It is unnecessary to travel so far before we start toward California, if it can be avoided. There would be no use to go down to the Multnomah Hotel by way of the depot if you could go straight through, the way I look at it.

545 The people in the territory in which our creamery operates are vitally interested in the construction of this road. We hear it continually at our picnics and meetings over the country. We carry on a series of picnics throughout the year, get the dairymen together, discuss (1004) matters of business which interest them and their business, and we hear this very often—they are insisting upon and demanding some kind of an outlet to California. The only alternative would be, if they couldn't get rail facilities, to build a highway. That has been discussed.

I should say that the experience of the Farmers' Cooperative Creamery during the years that it shipped its butter east, compared with the experience it had since it commenced supplying California markets has had something to do with the sentiment in that country. We acquaint our producers of our conditions, advancements, and so forth—they know what has brought about this increased prosperity to them. It is their being able to sell on the California markets.

I am acquainted with the dairy industry in southwestern Idaho, in the ten southwestern counties. There's the Farmers' Cooperative Creamery at Payette, and the same institution at Weiser, would be called two plants; Jensma Creamery Company at Nampa (1005)—in all nine creameries. Jensma Creamery Company is located at Nampa. The Nampa Cooperative Creamery has closed its doors.

The Department of Agriculture requires of creameries in Idaho a monthly report of your manufacture on all commodities, the butter manufactured, ice cream manufactured, cheese manufactured, and so forth.

Mr. THOMPSON. I would like, if there are no objections, to in-

546 troduce an exhibit at this time showing the markets for southwestern Idaho products, dairy and poultry development. It was made up in my office. I would like to have it introduced.

(Said statement was thereupon received in evidence, marked "Intervener's Exhibit No. 19, Witness Wagner.") (1006.)

As manager of the Farmers' Cooperative Creamery at Payette, I wouldn't say it was absolutely necessary, in order that the dairymen, poultry and egg industry of the territory from which our creamery draws its supply of butterfat, eggs, and poultry, develop or make the development which it is entitled to make, that this proposed line of railroad be constructed. But I would say that the construction of this road would better conditions. I believe it would give us greater

returns to our dairymen, which would in turn develop faster the dairy industry in southwestern Idaho and eastern Oregon. (1007.)

I am generally familiar with the facts and figures stated in Exhibit No. 19, concerning which I have just testified. I believe it states the true conditions as purported to be shown by that exhibit. It is compiled by the Department of Agriculture of Idaho, and we find them usually correct.

In the main, the industries concerning which I have testified are carried on largely on irrigated lands. It is incident to the usual development of irrigation projects. I believe the development of butter and poultry industry will increase in proportion to the increase in irrigable acreage developed. (1008.) There is no doubt but that the development of the Owyhee and Vale districts and the Black Canyon district will have a tendency to greatly increase the production which is shown in my exhibit.

547 The San Francisco market and the Los Angeles market are the same, practically so, figuring upon an aevrage basis. There would be times when the Los Angeles market was higher, and vice versa. The idea of shipping to San Francisco, our association in California would save—the San Francisco market would be supplied at all times without having to divert from Los Angeles. Some of our associations, those who are close to San Francisco, are sending their butter there, namely, the Modesto Creamery, the Riverdale Cooperative Creamery, in California, but those creameries cannot fully supply the demand in San Francisco, and there has been talk for some time that our entire volume would be diverted to San Francisco instead of Los Angeles. (1009.) When I speak of diversion, it is really not a diversion—it is a re-shipment from our Los Angeles to San Francisco plant.

Q. And is it your idea that a very important advantage accruing to you would be the fact that after your shipment arrived at San Francisco it could be re-shipped to Los Angeles without increasing the total distance materially?

A. Well, there wouldn't be so much butter to be shipped from San Francisco to Los Angeles as now is being shipped from Los Angeles to San Francisco. It would lessen the amount to be sent down there.

Q. Had you, in your statement, given consideration to the fact that your butter could travel via the cross-State line through San Francisco and on to Los Angeles at approximately the same total length of haul that it now travels in going direct to Los Angeles through Salt Lake?

A. I understand the distance is about the same. With regard to refrigeration that situation would be an advantage in connection with our shipments.

548 Q. Now, what is the fact, if you know, as to whether or not large quantities of the product which you ship to California markets, and which you say you would ship to San Francisco, are actually shipped into San Francisco from points more (1010) distant

than southwestern Idaho, and that there is a market there for your product to fill?

A. You will understand that those—speaking of the Los Angeles and San Francisco consumption of butter, it is only the product which is manufactured by these several cooperative creameries, and there are certain channels of trade to be supplied with the Challenge Cream and Butter Association; and they would ship that butter from Los Angeles to San Francisco rather than buy it from other sources, so we know nothing about other creameries' product that will come in there to supply. I have made sufficient investigation so that I know that there is an adequate market to take our supply.

In what I have said as to advantages I have given no thought or consideration to any advantage that might result through possible reduction in (1011) rates due to shortening of distance.

Mr. McCULLOCH. Mr. Wagner, do all of your company's shipments now move west into California, or do you ship some east as well?

A. Well, there are times, for example, in April the eastern market was four or five cents higher than the coast market, and we shipped four or five cars, that is, from our Idaho creameries. We have four creameries in Idaho which constitute this membership, and we shipped a few cars back about March and April to the eastern market, in an effort to equalize the markets.

549 The very great proportion of our shipments normally move to Pacific coast markets. We sell our products at a price that contemplates delivery at destination. That is the reason our company has found it decidedly advantageous in the interest of its members to transfer the marketing of its products to the nearby Pacific coast markets (1012), rather than the distant markets on the Atlantic seaboard.

Exhibit 18 shows that our business increased from 1916 from two hundred pounds plus to an estimated to manufacture in 1928 of four million pounds. It has been my experience in the past that demand for those products has kept pace with the increased production. We cannot supply our demands. Our association in Los Angeles is planning a half million pounds a month of outside butter to supply the demands of the association.

Based on my past experience, we do not anticipate any overproduction in the southwestern Idaho counties, even with largely increased areas of irrigated land, in poultry, eggs, dairy products, which will have any difficulty in finding a consuming market. We feel that such an increase as our company's business has shown in the past five years may be reasonably anticipated for the coming five years.

Q. Have you any doubt in your mind, as you are acquainted with market conditions, that if there was an increase in production of four hundred per cent in the next five years that the markets on the Pacific coast would readily absorb that increase? (1013.)

A. Our association is selling fifty-six per cent of all the butter consumed in the vicinity of Los Angeles, which includes those outside towns like San Bernardino, San Diego, Long Beach, and so forth, and their demands for butter is increasing all the time. We can't supply the demand. Furthermore, consumption is increasing in the California cities with the influx of population into that territory, and it now develops the fact that it requires more than three hundred thousand cows, new cows, each year on the watershed west of the Rocky Mountains to supply the increased demand on the California markets.

Our company does not ship any sweet cream. We have never. We made an effort to at one time, but the California law, or particularly the city ordinance of Los Angeles, rules that cream cannot be consumed or offered for sale when it is more than forty-eight hours old, and we can't reach it within that time.

It takes seven or eight days on the average, for a car of butter loaded out from our creamery to get to Los Angeles. That is the best time that has ever been made. (1014.)

Cream can't be sold after it is forty-eight hours old in Los Angeles. That is the time between the time it is drawn from the cow and offered for the consumer. That is the general rule. That would be true of San Francisco.

I would like to make, if you please, a little more comment on the possibilities of the dairy business, the growth of the dairy business in our territory, which has not been brought out by questions.

Due to the hoof and mouth disease in California, so many cows dying and being killed in that vicinity, there has been a great demand for cows in Idaho, and it has drawn great numbers of cows out of our territory. I am not in a position to say how many. I haven't kept track, but then I know a great many. For example, it is estimated that twenty-five cars were shipped out of three or four points in that section last year, but I won't be positive as to the number; and in an effort to stop that and hold these cows into our territory we have organized a loan association, and we loan money to the dairymen, giving them twenty months to pay this loan, which is five per cent of the loan per month taken out of their cream check. This loan association has been in (1015) operation a year, and we have loaned, up to date, we have made 243 loans, amounting to $105,985.03. We find that this is a very effective medium for putting new men into the dairy business, helping develop the dairy business, and keeping those cows from being taken out of our territory to California, and with the fact before us that we have increased four hundred per cent in the past five years, and with this assistance that we have to produce it, we can see no reason why we should not expand even more in the next five years.

Cross-examination:

We do not ship to Portland or to Seattle. We do not sell to Swift & Company as a rule. There was a time last year—last March—Swift & Company were short of butter, made us an attractive price

on a car, and we sold them a car. But as a rule we do not sell. That is the first car of butter we have sold to Swift for years. (1016.)

I know nothing about the rates either through Portland or via Ogden or Wells. We have never shipped over the route through Wells at all, for the simple reason that it is entirely out of line with us. We would have to transfer from a point down there
552 close to Gooding. (1017.) As I understand, the Wells cut-off is out of Twin Falls and we would have to, from the main line, go over to Twin Falls to get on this line.

The railroads do not route our shipments; we specify the routing. We do not sell either f. o. b. shipping point, or at destination; our butter is handled by ourselves in Los Angeles. And that is true in San Francisco.

If the cross-State line were built we would ship our Los Angeles butter via the cross-State line, instead of through Salt Lake, provided the rate were the same. There would be another condition in there—we would have to make as good time and receive as satisfactory service as we do now. (1018.) We have no complaint whatever of the service we receive from the Oregon Short Line. The service is perfect. The Short Line has worked along with us over there in a pretty earnest way to bring about this condition that obtains in the dairy industry.

Q. Well, if you had optional routes, would you take the business away from them and ship it down over the Southern Pacific, or would you continue to ship it to Los Angeles by the Union Pacific system lines?

A. Well, we would ship the cheaper way and the better way. We wouldn't take any business away from the Union Pacific and give it to any other road with malicious intent, not at all.

I know the physical condition of the roadbed and facilities of the Oregon Short Line and of the Los Angeles & Salt Lake all the way through, on the main line. As to whether I would anticipate that any such favorable condition as that could be developed within any short period of years by building a line across central Oregon
553 (1019), well, if they built the line from Crane—they have a good road out to Crane—if that road is built on out to the main line of the Southern Pacific, or the branch line we may call it, we can't see why that roadbed shouldn't be as good as any other roadbed. The roadbed from Ontario to Crane does not now compare with the main line, but then it could be with a reasonable amount of work, I should think. No doubt it would require the expenditure of large sums of money to do it. And that is true of building a cross-State line. It is true that this traffic is what has built up the present physical condition of the main lines of the Short line and the Los Angeles & Salt Lake.

Q. Now, if you take it away from them, what is going to be the advantage on their operations and on their ability to serve?

A. I don't know what the result will be, I am sure.

Q. Well, it is just within a few recent years that southern Idaho has come into such happy commercial relations with Los Angeles, isn't it? (1020.)

A. Yes.

Q. And your industry has been one of the principal ones to accomplish that relation?

A. You bet!

Q. Yes. It is just as short a route, and a little shorter than it would be via the cross-State line and the Southern Pacific, isn't that true? Or have you checked that mileage?

A. I am told—now, I am not in position to state what the exact difference would be—I am told the distance is about 400 miles shorter over the proposed route than the other way. That is to San Francisco. The distance to Los Angeles—I don't believe there would be a very great deal of difference but I haven't checked to see. But it is true there couldn't be a very great difference in the distance.

554 And we are not asking for better service, or any of those things to Southern California. It is simply an outlet of (1021) some nature to the northern California markets.

Now, assuming that the distance from Payette—that is one of our shipping points—to Los Angeles via Salt Lake is 1.135 miles, and the distance via Crescent Lake is 1,201 miles, the matter of distance would favor the present route to Los Angeles by 66 miles.

As to whether if we could use this Wells line from Payette, our distance would be 1,002 miles, I haven't checked it. But the Wells line doesn't appeal to us, for the simple reason that it is out of line to us.

Now, the other day we had a car of live poultry to San Francisco. The matter came up of sending it over that cut-off, as we wanted to finish this car at Twin Falls—we were about 3,000 pounds short in weight—and the car was ready to go on this train, but I was informed that we would miss connection at Minidoka or this other point with this Wells train, and we had to send that car around by Ogden. The service on that Wells (1022) cut-off isn't right. We can't control the time that we load a car of poultry—and to hold it 24 hours in the yards there would be suicide for us; the shrinkage would be terrible, and they would die in the heat. So for that reason that cut-off doesn't adequately supply the demands of southwestern Idaho. If that cut-off was farther up this way—for example, if that cut-off went from Murphy or Nampa south to some point—I am not telling you where to build a road, you understand, but if it was further up this way——

Q. You wouldn't be any more different than the rest of them on that. Just go right ahead. I just want to get your notion.

555 A. Well, I am not telling you where to build that line, but I am saying if we had an outlet from Nampa or Murphy south this would never come up, we wouldn't ask to have this other road, because it would have gratified the demands of southwestern Idaho.

Q. But with the Wells line there has been no change in the bulk of the traffic—it still goes around to Odgen, because that service is so much better; and to have this service you have got to have volume, don't you?

A. Yes.

Q. And to have volume you have many more train operations than you would—— (1023.)

A. Your Wells cut-off was built there to gratify the desire of the Twin Falls people, and you haven't enough business there to give you service. If you would arrange for better connections and divert a lot of this traffic that goes around by Ogden through that way you would have better service and could maintain daily trains. If you had daily trains I am sure that a lot of the traffic would go through there.

Q. Well, business even in the Twin Falls country comes up and goes around through Ogden, doesn't it?

A. I am not acquainted with that. I know very little about it.

The Meridian Produce Company is at Meridian, Idaho. It is on the Boise cut-off. I understand that is considered a main line now. They ship some down through the Wells line to San Francisco. As to why if they can do it we can't do it: They have a house in Twin Falls. They are shipping from Twin Falls, not from Meridian. (1024.) That is, not to any great extent. There has been cases where they loaded part at Meridian and then filled out at Twin Falls, but as a rule they don't.

556 Now, I was talking about seven or eight days to ship down to Los Angeles. As to whether, ordinarily, that much time is consumed in the shipments from Payette: We find that seven to eight days is the time in every case. If we wanted quicker service I don't know whether we could get it there any quicker. I haven't asked. I am assuming that that is the best they can do in taking it there.

Exam. ROGERS. What is the fact as to the use of this cut-off—does the carrier take the unrouted traffic over that cut-off, coming from the west on its line or does it take it around through Ogden?

Mr. SPENCER. I don't know. How about that? The unrouted traffic? The general freight agent says, would go via Wells.

Exam. ROGERS. It does go via Wells?

Mr. SPENCER. Is that the fact, Mr. Godwin? (1025.)

Mr. GODWIN. The Wells gateway is the direct line from western Idaho to San Francisco.

Exam. ROGERS. If you get an unrouted shipment, which way do you take it from western Idaho?

Mr. GODWIN. Well, the operating department would handle that via Wells. We have had very few of them. None of it has come to my personal attention.

Exam. ROGERS. Most of the traffic is routed by the shipper now?

Mr. GODWIN. Yes, sir; for some reason or other he routes it via Ogden. (1026.)

Q. On page 4 of Exhibit No. 19, which is the exhibit prepared in Mr. Thompson's office, the last tabulation on that page, which is the last tabulation of the exhibit, gives the origin of dressed poultry that is consumed in the San Francisco and Los Angeles markets, and it shows that at San Francisco 20 per cent of that market is furnished by Idaho, Los Angeles 18 per cent by Idaho, and then at San Francisco it says 57 per cent of that market is furnished by other coast States. Now have you any knowledge as to what that means, other coast States? What States produce that?

557

A. That would be Utah, Oregon, Washington.

Q. Does Oregon furnish a substantial part of that, do you know?

A. It does.

Q. So that the completion of this cross-State line will in your opinion permit your poultry growers of Idaho to come into more effective competition with the poultry growers of western Oregon in the San Francisco market?

A. I don't believe you would call it in competition with them. The Idaho and Oregon growers would be enabled to ship their poultry into the San Francisco market at less cost.

Q. Well, it would not help the poultry growers of western Oregon any, would it, to have this cross-State line? They would not use it any, would they?

A. Western Oregon, no; I would not think it would help the (1027) poultry growers of western Oregon.

And that is where the poultry of Oregon is raised, largely. But you understand we are working for southwestern Idaho and eastern Oregon. We have eliminated western Oregon in the argument.

Q. Yes; and it is a fact that your contention here is that you want the cross-State line in order that you may put your poultry and other products into the San Francisco market in more effective competition with the producers of the same commodities in western Oregon, who now supply that market to a large extent?

A. It is going to San Francisco as it is. I can't see that it would be in competition.

It is not going to Los Angeles according to my own figures. The poultry is going to San Francisco. We ship no poultry whatever to Los Angeles. Our butter now goes to Los Angeles, but butter is a different proposition. The butter you will find produced in western Oregon is largely coming to Portland and Seattle; it does not go south. There is very little western Oregon butter that goes to San Francisco. (1028.)

558

We cannot now supply the Los Angeles market with butter.

Q. Well, until you get that supplied, what is your need for shorter rail facilities into other markets?

A. We are buying about a half a million pounds a month from outside sources, principally coming from Colorado.

Q. For the Los Angeles market?

A. Yes.

Q. Well then, why do you want shorter routes into San Francisco when you can't now supply the market you have?

A. Well, as I stated, our market is in both Los Angeles and San Francisco, and we are endeavoring at all times to supply both markets; and by shipping to San Francisco we could ship to San Francisco at a saving and avoid having to ship so much butter that has recently been shipped from Los Angeles back to San Francisco. In other words, we cannot supply the San Francisco market as well as we can the Los Angeles, and it is necessary to ship a lot of butter from Los Angeles to San Francisco, which, by turning it around and shipping it over the cross cut, we could avoid.

Exam. ROGERS. If you can't supply the Los Angeles market, why do you ship any to San Francisco?

A. We can buy this surplus on the Los Angeles market better than we can on the San Francisco market. There is more surplus (1029) butter being offered for sale on the Los Angeles market; we can naturally buy it cheaper.

559 Q. (By Mr. DEY.) Well, I can't reconcile your statement.

A. You misunderstand evidently.

Q. You are unable to supply the Los Angeles market and at the same time you are buying a surplus on the Los Angeles market?

A. We are. We are buying a surplus, and we are buying that surplus for both plants, both Los Angeles and San Francisco.

We buy it all over the country, anywhere we can—Colorado, Wyoming, Montana. As to why we don't dispose of all of it in Los Angeles, since we can not supply that market: As explained, we find it advantageous to do business on both markets, Los Angeles and San Francisco. There is a condition existed there that was extremely hazardous to us. The San Francisco market was all the time lower than Los Angeles. The result was that brokers were buying this eastern butter, shipping it in there, transferring by water to Los Angeles and selling it in competition with our butter, and it was necessary for us to go into the San Francisco market in an endeavor to equalize and keep those markets equal. They should be equal; there is no reason why they should not be the same.

It is not our creamery association that (1030) does this buying; it is our selling association. But the board of directors and members of the selling association are the members of the Creamery Association. There is a director from each creamery on the board of directors of the Challenge Creamery Butter Association. For example, I am the director from Idaho on the Challenge board.

560 Redirect examination:

If we didn't get into the San Francisco market with our poultry at all, I doubt if western Oregon or Williamette Valley poultrymen would be able to supply the demand, or come anywhere near supplying the demand. The demand for poultry is extremely strong in San Francisco. We can't supply that demand, due to the fact that they are provisioning so many ships at the San Francisco port.

I can't see that there is any competitive condition existing between us and the Williamette Valley.

Mr. SPENCER. If I may ask one more question, they are shipping poultry east from California, San Francisco, and Petaluma, aren't they? (1031.)

A. You bet.

Mr. SPENCER. Then I can't understand why, if they ship east out of there, how it happens that they don't supply themselves, that they can't supply themselves.

A. Those are the things we can't explain; as regards poultry, poultry and eggs, California is an export market instead of an import; yet at the same time we can sell our commodities better in California than we can in New York. Why those things exist I don't know.

Mr. ELLIS. Just another question on that point: Isn't it a fact that your California egg producers have specialized and developed a particular class of trade in the eastern markets, and that that accounts for the shipment, large shipment east?

A. No doubt it does. The California egg producers all have henneries, and they produce a better quality of eggs than we do in Idaho, and that grade of eggs will command a better price in eastern markets than our eggs, and there is no doubt that that is partly the reason in so far as eggs are concerned.

As an economic proposition they are a better grade and they
561 will stand a longer shipment. And that condition exists the full length of the Pacific coast. (1032.)

562 H. M. NOLTE was thereupon produced as a witness on behalf of complainants, and, having been first duly sworn, testified as follows:

Direct examination:

I reside at Lakeview in Lake County, Oregon. At this hearing I represent Lake County Chamber of Commerce. I am one of the directors and chairman of the executive committee of the Lake County Chamber of Commerce. It is an organization comprised of members throughout the county, whose purpose it is to develop our resources and other industries which might come as a result of those resources. It is a county organization and not confined exclusively (1033) to the Lakeview section from which I come.

I have resided in Lake County seventeen years. During that time I have been engaged largely in real estate and insurance business. In connection with my business I have become familiar with Lake County and its resources. I am familiar with its transportation problems.

I have compiled some data in connection with timber tonnage that would be available to this line and extensions therefrom, as well as having made a reconnaissance over the area known as the Fort Rock Desert, that section lying east from Fort Rock to and beyond Christmas Lake.

As to the principal production of Lake County and what its principal needs are, so far as transportation is concerned—up to the present time our industries have largely been livestock, farming, and at this (1034) time it is beginning to develop into lumbering activities and dairying, poultry rasing, more intensified farming.

563 Lake County is 7,834 'quare miles. A considerable portion of that is covered with merchantable timber. There is in Lake County Fremont National Forest, and that probably covers two-fifths of the timbered area of the county, possibly three-fifths being privately owned, and the cruise on that is estimated at 14 billion. I say estimated; that is taken from actual cruises on private timber as well as the reconnaissance cruise on the Fremont National Forest. I might add to that that there is part of the Deschutes Forest in Lake County. That would be in addition to my figures on timber in the Fremont Forest. When I speak of privately owned timber and the estimates, I have in mind surveys or estimates that have been made by official representatives of my county. I made particular reference to the survey of reconnaissance survey of possible timber development as made by the Fremont National Forest, and I procured the figures from that office just a few days ago. (1035.)

There has been some reconnaissance or cruise of the privately owned timber as well in my county for taxation purposes, but investigation subsequent to that survey indicates that it is underestimated possibly twenty to twenty-five per cent.

The total figure of merchantable timber in my county is 14 billion. That would be approximately 6 billion in the Federal forest reserve and 8 billion private holdings.

Q. Where is that located with reference to any transportation facilities at the present time?

A. I would make reference to the Silver Lake unit or working circle, as referred to by the Fremont National Forest. That comprises the timber which lies south of a line drawn east and west through Fort Rock, that being the boundary between the Deschutes and Fremont Forests. That extends south to Yamsay

564 Mountain, which is south and west of Silver Lake, and then runnning south and east onto the Summer Lake rim, being on the watershed tributary to the town of Silver Lake and the lake itself. That unit contains 1,219,841,000 feet of timber. Privately owned (1036) 965,561,000 feet, making a total of 2,085,402,000. Now that does not include the forest that lies immediately north of Fort Rock and west to the Lake County line, with possibly, I would say, another billion feet available there.

In view of the fact that the Forest Service is adopting a policy requiring that the timbers within Lake County must be milled in the county, that is Forest Reserve timbers, the logical millsite for the timber I have just mentioned would be at Silver Lake or somewhere in that territory. There are logical and practical milling sites in that territory. Several creeks that run north out of the timber and into the Silver Lake Basin afford ample water, as indi-

cated by the Thompson Reservoir in that irrigation district. There are no railroad facilities within convenient access to that timber at the present time. I believe that timber would be served by the construction of the cross-State line proposed in this case because of the fact that the survey as originally made runs through Fort Rock.

Q. Now if the plan of the Forestry Department is carried out as to the milling of that timber, have you made any estimates of how much tonnage that would supply? (1037.)

A. The plan as laid out by the forest reserve is on the basis of a perpetual cut, and they made their estimates on a 50-year basis, and the Silver Lake unit, figuring just in round figures 2 billion
565 feet of timber, there is available there a cut of 2,000 cars per year for 50 years. Now that does not take into account the timber in the Deschutes Forest that lies immediately north of Fort Rock but lies within the boundaries of Lake County. For the upper grades of the timber the market is in the east, and just at the present time I might add that the lower grades of lumber which have been going into box shook, some of them are now being cut into what is known as common, and there is a demand in the east again. One of our lumber firms in Lakeview, one of the milling operations, Edgerton & Adams, just last week informed me that they were shipping dimensions east that ordinarily would go into box lumber.

Concerning the timber stand of our county and its ultimate use: With the possible construction of the proposed cross-State line we believe that an extension south from Fort Rock into this Silver Lake timber is justified; further, that there is a Summer Lake unit, which would provide 200 carloads of lumber yearly on the same basis of a 50-year cut; and (1038) that Paisley, south of that, what is known as the Albert Lake unit, the forest and private timber comprise 1,500,000,000 feet, which would afford, on the 50-year basis, 1,500 carloads of lumber yearly. This does not, of course, take into consideration other tonnage from agriculture and livestock, which I believe has been previously covered in the testimony of Mr. Teutsch.

Substantially all my figures of timber tonnage are calculated on the basis of a perpetual cut; a 50-year cut; and they believe that by that time the second growth, or, in other words the timber that was not cut in the first cutting would be available. In other words,
566 there is a limit on the size of trees; I believe anything under 16 inches is left, and that tree would be available in fifty years, together with such other timber as might grow.

Most of this timber that I have described is located in the western portion of Lake County. However, in addition to the Abert unit, which surrounds Paisley, there might be taken into consideration Warner Lake unit, which lies east of Abert rim, north and east of Lakeview. There is 1 billion 500 million in that. I didn't make a definite total of that, however, but I had the figures in the aggregate and that is approximately what it totals up.

The suggested millsite in the Silver Lake district would be approximately between 20 and 25 miles from Fort Rock. (1039.)

The timber from that area could be made tributary to the cross-State line by a branch of approximately 20 or 25 miles. Silver Lake is by road, which is almost direct, 19 miles south of Fort Rock, and the logical milling site there possibly would be anywhere from two to four miles south of that.

The Nevada, California & Oregon Railroad, which extends to Lakeview, serves Lake County at the present time. That was formerly a narrow gauge line. It was converted to standard gauge during the month of May, I believe, and service was established. I am not sure whether it is now controlled by the Southern Pacific Company. The same officers and management are in charge of the road, and all negotiations and transactions are carried on through the former offices of the Nevada, California & Oregon Railroad and not the Southern Pacific. The Nevada, California & Oregon Railroad has approximately 13 and a fraction miles of railroad within Lake County. (1044.) That is the total of railroad mileage within my entire county.

Other resources that demand a rail outlet at the present time
567 in addition to the timber are mineral deposits. I might make particular reference to Alkali Lake. The tonnage there I haven't—I have an estimate of 50,000 tons yearly. That is taken from statements made by the people who own the lake. That is the eastern part of Lake County. The original survey I believe would be somewhere around thirteen or fourteen miles from the Harriman survey or the proposed cross-State line.

As to other resources in the county, particularly as to possible agricultural development, there are numerous valleys possible of development, some of which are just in the making now, and with proper transportation facilities there is no reason why they should not produce a greatly increased tonnage. I would refer first possibly to the valley which this (1041) cross-State line, its original survey, passes through; that is the Fort Rock and Christmas Lake Valleys, lying east of Fort Rock a distance of approximately 40 miles, 35 to 40 miles. They would be immediately adjacent to or traversed by the route of the proposed line; the line as surveyed running through the northern part of that area.

I made a special trip into the Fort Rock Valley area last Sunday, the 5th of August, with P. T. Fortner, our county agent. The situation as I find it there at the present time with regard to development is this: About twenty years ago the valley was settled up by possibly a thousand homesteaders—possibly that is exaggerated a little, I would say 750, judging from the records of patented lands. They went in there just following the survey of this proposed cross-State line. I found that they had put up better than the usual class of improvements on these homesteads—this from past observation as well as the one I recently made. I have been through that territory before. I might add that many of the houses that were
568 constructed were sided and not of the ordinary box type of house that you find in a newly settled country that the home-

steader will put up; many of these places had large barns, and a great (1042) many of them windmills, and they were all quite well fenced, a number of places even having open wire fences around them. At the present time there are very few families residing in the area. I visited a number of those places, particularly south and east of Fort Rock, where at this time there is development under way for utilizing the underground waters by pumping. One of the first places we visited was that of Mr. John Ernst, located about seven miles southeast of Fort Rock. We found that Mr. Ernst has a ranch of 120 acres. I found that he is utilizing a well that was drilled as one of the program the State carried out a few years ago. This well was drilled 220 feet in depth. The water rises to within 25 feet of the surface. He has installed a pumping plant of sufficient capacity to irrigate the 120 acres at a cost of approximately $20 per acre. He informed me that his maintenance on the plant this year would be cut down to not exceed $1.70 per acre, possibly $1.50, due to the fact of his being able to get Diesel oil at a lower rate than he had previously. He is at this time irrigating approximately 50 acres; some 20 acres of that he had in alfalfa, planted some four years ago. He informed me that last year this alfalfa made a return of better than four tons per acre, and (1043) this year of course he is unable to determine yet what the yield will be. However, he made an early cut, and the second crop is now on and is in some places three feet in height, of which I have a bundle of it here that I cut from his field last Sunday, as well as taking a photograph of it (exhibiting same).

569 Q. Is the alfalfa fully developed at this time? Is that ready for cutting?

A. I might add that he planned on cutting this second crop for seed, but he was informed by the county agent that he let his first crop remain on the land too long; he should have cut it by the first to the tenth of June and he didn't cut it until the 20th of June.

This area I am talking about is within the so-called High Desert. (1044.)

I have some pictures which will depict the situation or manner in which the Fort Rock Valley is being farmed. Unfortunately I didn't have but two copies of these. I was not aware of what was needed when I came up here. I can provide some of them, but it will take a few days to get them. That is the Ernst ranch; that is the potato patch on the Ernst ranch; that is rye on the Ernst ranch, and this is alfalfa on the Ernst ranch.

These are the pictures I referred to. They were taken by Mr. Fortner on Sunday, the 5th day of August. They were taken on the John Ernst ranch in the Fort Rock Valley. They correctly depict the conditions that I found to exist there. (1045.)

(The three photographs so offered and received were thereupon marked "Complainant's Exhibit No. 20, Witness Nolte.")

I might comment on these by stating the one with the barn and the spud patch, the spuds were in a thrifty condition. Some in the hills

were as large as goose eggs, and there was no indication that there had been any frost to damage the tops.

Exhibit 20 consists of three pictures taken at the John Ernst ranch. I believe I have commented on the first one. It
570 shows the barn and the spud patch, showing that spuds can be grown, and they were not damaged by any possible summer frosts, as has been charged against that district. The other two are field crops, one of which is alfalfa, a sample of which was shown here this morning. The alfalfa was in fine condition, and stood from 30 to 36 inches in height. As previously stated, this was cut on the 20th of June and the crop, as indicated in the picture, matured between that time and the date the picture was taken. These crops are raised under irrigation by pumping from the well that was described in my testimony before lunch. (1046.) The other picture is a field of rye growing on the Ernst ranch, as it shows there, about 48 inches in height. That is a sample of the rye here (exhibiting same).

Another crop of great promise is the brome grass, of which I brought a sample. It is a very hardy grass and is adapted to climatic conditions, such as exist in central Oregon, and is extensively grown all through the northern part of the United States, particularly in the Dakotas, and offers great promise for both grazing possibilities as well as hay.

Another plant I observed on Mr. Ernst's ranch that offers great promise on the grazing angle is sweet clover. There is only a few plants that originate from seed in other crops he had on the place, and I didn't disturb them, but the evidence was sufficient to warrant the statement that sweet clover is adapted to that section. This sweet clover in particular is a crop that is adapted both to irrigation and non-irrigation, as it will mature in a very good forage or pasture crop as well as a possible hay crop, even without irrigation, where there is a limited rainfall such as exists in eastern Oregon.

I might comment on that by stating that on the 20th of June
571 this year our county agent, assisted by the State agent leader, Mr. Ballard, had a pasture excursion out of Lakeview and visited numerous ranches around that point, and he particularly (1047) commented on the adaptability of yellow sweet clover in particular to eastern Oregon sections, and enlarged on its possibilities as a pasture crop, both on dry and irrigated lands. This also holds considerable promise for the Fort Rock area.

As to the condition of the John Ernst ranch, it has been tested over a period of years. However, the climatic conditions this year have not been as favorable as in previous years. The spring weather was backward, as we all know, this season, all over the coast, and then followed by rather excessive warm weather. However, the crops show every indication that they could be profitably grown and yield sufficient returns to warrant the investment connected therewith in development. There are other farms of a similar nature being developed in the Fort Rock Valley. The same date we visited another

ranch being developed by H. N. Parks, who was the man that made the research work that resulted in the development of these pumping wells. We took pictures of the development. (1048.) I might just relate the conditions under which we found this development taking place. These two are pictures that were taken. They correctly depict the situation we found and so far as the manner of applying the water was concerned.

(The two photographs so offered and received were thereupon marked "Complainant's Exhibit No. 21, Witness Nolte.")

572 Describing the conditions that I found on this development, the Parks development—the one marked 21 shows a building in the background and two men standing on the headgate works close to the pump house on the H. N. Parks ranch. Mr. Parks, as you possibly know, was the man instrumental in having the research work done which discovered this seemingly unlimited supply of underground waters. This plant was just recently installed; it has only been in a few weeks. (1049.) Mr. Parks has cleared off some 50 acres of ground, plowed and cultivated it, and just recently sown alfalfa, which was coming up when this photo was taken. This particular well is 250 feet deep. The water rises to within 30 feet of the surface, with a pumping lift of 39½ feet. The cost of installation, engine, pump and well, totals $3,500. He plans to irrigate 200 acres from this well, and observation leads me, as well as County Agent Fortner, to believe that he has much more water available than is even necessary for the 200 acres. At the time we were there he was pumping and irrigating this 50 acres. The pump was throwing 1,300 gallons of water per minute, filling a ditch four feet in width by ten inches in depth. The water was flowing in corrugations through this field, taking three men and himself to handle it, and even then it was more than they could take care of. It led me to believe that he had water enough there to easily irrigate a half section from the head as compared with heads of water used in other irrigation projects which I have observed. It was a most unusual surprise to me to witness this enormous volume of water. I had heard about it, and it seems to offer tremendous possibilities in the way of development of irrigation in that district.

573 The Parks development is located (1050) about three miles south and east of the John Ernst ranch. I can give the section, township, and range locations, if you desire: Section 33, 26, 15. The Ernest well is located in section 17, 26, 15.

As to how much acreage there is of the type I have described on the Ernst and Parks ranches which may be developed in a similar manner in the Fort Rock Valley, I might state that for the purpose of comparison and forming my observations I asked the deputy county assessor to prepare a map showing the areas of different lands in that district, which he did, with the information that he himself was one of the homesteaders in that area, that he was familiar with it, and that the map as prepared shows approximately, however, not definitely, the areas of land that might be available for possible agri-

cultural development. However, not all are within the proven area of this subterranean water supply. The area extending from Fort Rock to a point 15 miles east of Christmas Lake lies in this area. The district as (1051) surveyed in the geological work by Mr. Parks does not extend that far east. Mr. Parks informed me that he estimated that there was one hundred thousand acres in the area which was proved to be underlain with the waters as developed by these four or five test wells. He said further that the district itself might extend to include more, even up to 200,000, but that had not been determined as yet. This data secured from the county assessor indicates that lands that were homesteaded and possibly were of a fair average value totals somewhere between 280,000 and 290,000 acres.

I might comment further by stating that the assessor, when he prepared this map, stated that a demonstration was conducted, pumping from surface water supply, in section 5, 27, 18; that at an
574 18-foot lift water was delivered on lands owned by Mr. Gooch, by a 6-inch centrifugal and 3-inch centrifugal, both pumping at the same time for a period of twenty-four hours and did not diminish the surface supply of water. The land referred to is the High Desert.

The Fort Rock region presumably extends to Christmas Lake. (1052.) That area would possibly comprise 170,000 acres, something that way.

In addition to the crops which may be produced under irrigation, I would say the land in the Fort Rock Valley is susceptible to development through dry farming methods to some extent. I observed this: That there are several different kinds of soil in that valley. On the Parks place, for instance, it is a clay loam sand mixture; on the Ernst ranch it is a pumice sand loam and apparently a volcanic ash, as the soil was lighter in color. Then there are other areas that vary in loam mixture, along the foothills of the Connley Hills. These other areas are just south of the Parks ranch. There is considerable vegetation growing, among which is what is known as wire grass. I noticed that for several miles through that country that this grass is only found where moisture rises to the surface, or moisture is on the surface, indicating that water is in the soil, or rises through it as a result of the porous condition because of the pumice sand content. This would lead one to believe that such crops as rye, wheat, sweet clover, and other hardy crops adapted to dry farming could be grown on land of that character.

Further to the north and east an area around Christmas Lake that I observed has various weeds, the same as we find (1053) in the Goose Lake and Summer Lake Valleys, growing, some of them, from six to eight and 10 inches in height. One particularly
575 is what is known as Russian thistle. It is a plant which is a pest in the irrigated districts as we all know, yet it is growing out in this country, showing there is considerable moisture in the soil.

Also in this area we found a great deal of this native grass known as rye grass, six feet in height in numerous places. We interviewed Mrs. Buchanan, who runs the postoffice at Lakeview, the postmistress at Lakeview. She stated that they had a rye grass pasture about a half a mile from their buildings, on which last year, the 50 acres, they got 70 tons of this class of hay, rye grass, for wintering their stock, it being suited to feeding cattle and horses.

The water in that section would support in farming a project approximately 100,000 acres, according to the research as conducted by Mr. Parks. I particularly asked him about that, and he said that it was his opinion that approximately 100,000 acres was in that area, in which there might be developed this water the same as is on his ranch.

These pictures were taken in what is termed (1054) the High Desert.

This rye grass referred to is the native wild rye grass, and it is a common expression among the pioneers of that section to make this comment: That whenever you see rye grass growing it is an indication that moisture is not of a great depth; that is, that there is more or less moisture coming up from a subterranean source, if not it is a result of rainfall.

In my judgment the construction of the cross-State line undoubtedly would result in the recolonization of this Fort Rock area and its development. As to what the lack of transportation has to do with the fact that it is not being actively farmed at
576 the present time, except to the limited extent I have described, I would say that in the particular instances of these two men whose ranches we visited, some of the problems confronted, among others were the matter of getting in their fuel oil for their pumping work—the cost of these would be materially reduced as a result of transportation. I have observed that at the present time in securing colonists or settlers for an area such as this, that one of the first questions asked is: "Well, what about transportation?" We at Lakeview, until our (1055) railroad was standardized, were particularly handicapped in that regard. One of the first questions always put up was: "Well, we can't ship anything over a narrow gauge railroad; how do you expect us to locate under such conditions as those?" The same thing applies to such communities as Fort Rock, without transportation. People when they are looking for a home invariably look for an outlet either by rail or by highway. There are highway projects now pending that will materially assist in developing this area, but not to the extent of in any way taking the place of a railroad.

The length of haul from the John Ernst ranch in the Fort Rock Valley to a railroad at the present time, say to Bend, would be between 65 and 70 miles. I believe Bend would be the nearest rail point. Approximately the same distance possibly to the line extending from Bend to Klamath Falls.

In order to reach any of those rail facilities that I have described it will be necessary to cross some mountain ranges. There is the

Walker Range, part of it; Sugar Pine Mountain lies between that country and the Great Northern or the Southern (1056) Pacific's Cascade line. The principal disadvantage, however, is the
577 fact that area in there is subject to considerable snowfall, and road conditions are bad through probably six months of the year.

I have made a study of precipitation records for our county. As to rainfall: I happened to secure some records from the engineer who put in our irrigation project at Lakeview, among which was a blueprint that was kept at the old Indian fort about 25 miles southeast of Lakeview, one of the oldest weather records anywhere in that area of northeastern California or northwestern Nevada or south central Oregon, which dates back to 1866, which seems to indicate that there was a period at that time when precipitation was considerably in excess of what is shown by present day records. The old pioneers recount that Goose Lake was dry in the fifties, about '53; that following that it filled up; and the Pacific coast records, as recorded in the Willamette Valley and elsewhere, indicate that in the early sixties there was a period of rainfall that possibly was considerably above what we have to-day. Those records substantiate that. From this, the record that was kept by this fort, for the period 1866 to '76, the precipitation was 19 inches plus; '76 to '86, 21 inches plus. Our Lakeview records start (1057) in about '85, I believe, '85 or '86, and the earliest records we have—in compiling data we always refer to the earlier days in Lakeview, in our old Commercial Club literature and such—and they show it as being 17.80 inches of rainfall. That is per year for Lake County. That would be possibly for the period '86 to 1896. From 1896 to 1906 I have some of those Government bulletins here with me, but I can give them close enough approximately; they show a precipitation of 15 inches; the
578 ten-year period following that it dropped to something like 13, and the year of 1924 our weather station at Lakeview reported 6.80 precipitation.

Now there is a period from 1866 to 1924 with a drop from an average of 21 inches to six and a fraction. So it is reasonable to presume that we are dealing with this situation at the present time under the most extreme drought conditions. It is likewise reasonable to presume that there will be a return of those cycles, under which conditions the stock industry was built up in eastern Oregon, as our old pioneers refer to the famous eighties as being such thriving, prosperous times among our stockmen, which was largely due to the fact that they were getting a reasonable amount of precipitation. (1058.)

That the cycle will turn the other way has been proven by records that have been kept in various weather stations throughout the country over a long period of years. That has been the history of all weather records. As the saying goes, there has never been an extreme but what you may expect it to be broken.

Exam. ROGERS. This rainfall that you show, is that all in one spot or is it distributed, or how?

A. Well, I would not say so. The comparative records of Lakeview—well, there was a station at Christmas Lake; they had a station there I think for three or four years. Their precipitation at Christmas Lake run something like 11 to 12 inches as compared to our precipitation at Lakeview of some 15 inches.

It is true that some of the lakes of central Oregon, especially in our section of the State, that were dry, or nearly dry a few years ago, a year or two ago, are starting to fill up again during the
579 last year. Goose Lake, for instance, is known to be dry in 1853 and it went dry again in 1924; in 1925 it began to fill up, and '26 it increased, and '27 and '28. And likewise our weather records show that in 1927 precipitation at the Lakeview weather station was fifteen and a fraction inches for the period of September to September (1059), or the crop season, and for the period from September, '27, to September, '28, this present year, it will be around 12 inches, slightly under last year. (1060.)

Q. What is the State of Oregon or your county government doing toward developing highway facilities in Lake County?

A. The State highway program now contemplates the completion of our through highway from the California line by way of Silver Lake to a connection with The Dalles-California Highway at LaPine within the next three years, under the present program, I believe. Further, there is a project on now that is being handled independently of the State highway program, during the preliminary stage, at least, known as the Yellowstone cut-off. This road contemplates the construction of a connecting link in our highway system from a point near Paisley to the Lake County line and Harney County near Wagontire Mountain. There has been an organization formed comprising some nine counties of northern California, Oregon, and Idaho. That association has raised funds, now have a paid secretary to promote the proposition. We are receiving cooperation and financial support in northern California, as well as having the San Francisco Chamber of Commerce back of the project.
580 This will, when completed as planned, develop a much shorter route between California points and the Yellowstone National Park. Approximately 70 miles of the State highway has been completed at the present time. Other sections have been graded, but not gravelled (1061)—sections in the Summer Lake area. I have included in that a few miles south of Lakeview as a part of that particular highway.

I believe the construction of the cross-State line will benefit Lake County as a whole. While we have a standard gauge railroad in to Lakeview, there are many advantages to be gained by a route connecting Lakeview on the north with this cross-State line, and particularly connecting us up with the State of Oregon. We are told repeatedly by our business men and merchants that Portland is a

much better buying market than San Francisco, and at the present time we—even under present conditions, we have a little freight rate advantage into Portland, and with the construction of this line it would be materially increased and we would have a direct rail connection, which we haven't at the present time. Rail shipments now have to go south by way of Fernley, Nevada, Roseville, California, and to Portland. However, I might add that some shipments are coming into Klamath Falls and being trucked across to Lakeview.

When I say that Portland is a better buying market I mean that the merchants there can buy to better advantage. (1062) I have heard of several specific instances where they can buy their merchandise and supplies in Portland to better advantage than they can in San Francisco.

It would undoubtedly be an advantage to be placed in more direct contact with the State Government and with the State colleges and schools.

Q. Is it your thought that the completion of the cross-State
581 line would hasten the extension of the line from Lakeview north? Is that what you had in mind in suggesting that?

A. I believe that a line from Lakeview north is—well, we know that it is absolutely necessary. When it will be built is the only question that will enter in there, because the timber tonnage is there, and the railroad is the only way it can be moved. It can not be moved out on foot.

If the line I mentioned north in connection with the cross-State line were never built, I would still say that the cross-State line would result in advantage to us in this way, that it will develop an area of country that would materially increase our assessed value in the county and will assist in the growth of the county as a whole.

I believe a line connecting the proposed cross-State line with the stub-end at Lakeview (1063) is the plan that will adequately and properly develop the county.

I have taken active part in railroad-development work in Lake County in the past. About 1916, I believe it was, Mr. Strahorn proposed a system of railroads to develop central Oregon, and from the beginning of his project I was in close touch with him. At one time—in fact, in 1916 it was—I was on a committee that assisted him in getting rights of way from Lakeview north through Lake County. His plans at that time were a line running from Bend southeasterly, and from a point near Millican a line running south to Silver Lake, with a projection to Klamath Falls, as well as through Paisley and on to Lakeview, over the route we have been discussing, the line from Millican extending on to a point near
Burns. Then later, after he began actual construction of his
582 line out of Klamath Falls, I was again cooperating with him in the matter of the location of that line, as well as procuring some rights of way for him on the Klamath-Lakeview line, which now seems to be out of the scheme altogether.

Some mention has been made in this record concerning the possibility of completing what has been known as the Modoc Northern. That is a line that the Lakeview extension connects (1064) with.

Q. Will you state in a comparative way the advantages that line, the Modoc Northern, to your community, as distinguished from the advantages of the cross-State line? State which one will serve your purposes best?

A. Well, from one angle in particular, in the matter of lumber development, it appears that our lumber industries, if developed as result of the building of the cross-State line and feeders out, would result in a direct profit and benefit to the whole of Lake County, whereas with the construction of the Modoc Northern there is a tendency to take advantage of the more beneficial freight rates in communities like Klamath Falls, and possibly even Alturas, to attract the timber from Lake County to those points. In other words, those towns being located on the main line naturally would have an advantage over Lakeview and other towns that might develop as a result of milling activities, whereas with the cross-State line being closer to eastern markets the rate should be more advantageous.

Q. Do I understand that you mean to say that the Modoc Northern would result in development in California and Nevada, whereas the cross-State line would result in the development being fostered within the State of Oregon?

A. We have cause for some apprehension on that point by reason
. of the fact that a year ago the Pickering interests, (1065) who
583 now propose a mill at Alturas, had an option on some 700 million feet of privately owned timber that lies directly east of Lakeview, indicating that there might be a possibility of their desire to haul that timber to Alturas in case they should have concluded part of their plans for that plant at Alturas.

To summarize my suggestions with regard to this railroad development, it is substantially this, that we want the railroad picture developed in such a way that it will make Lake County a part of Oregon, and not part of California.

I have examined the tonnage estimates prepared by W. L. Teutsch and introduced as Exhibit No. 1 in this record, so far as the same covers tonnage to be moved from or to Lake County. I would state that Mr. Teutsch hasn't, apparently, included therein the available timber tonnage that I have given earlier in this testimony.

Q. Mr. Teutsch's testimony was intended only to cover agricultural commodities?

A. Well, then I might add that he states here, in potential tonnage for the cross-State line from development, in his (1066) areas, he includes in the Summer Lake and Silver Lake district only those lands under the present irrigation projects. There are several thousand acres of land that are under independent water supplies, which would increase those areas some three times. Fort Rock and Christ-

mas Lake Valleys, he indicates an area of 230,000 acres, with a possible 20 per cent development, or 46,000 acres, whereas I have earlier stated that there is a possible hundred thousand acres in that area. The statement of tonnage would correspondingly be increased by these comparisons.

584 In my judgment, Mr. Teutsch, in making his estimates for Northern Lake County, in his Exhibit No. 1, was unusually conservative.

One point I might add in connection with the well on the John Ernst ranch, that is, that it was given a test of 108 hours pumping, throwing 800 gallons per minute, and in no wise diminishing the supply.

I might also add that another one of the wells drilled by the State is located on the ranch of Frank and Harry Crampton, in section 15–26–14. This well has a lift of 41 feet, using a 12-inch centrifugal pump, with a flow capacity of 220 gallons per minute, and it has been subjected to tests of 24 hours without diminishing the supply. (1067.) These men are working under similar conditions to those of John Ernst. They have several acres in alfalfa under irrigation, are running a farm flock of sheep, which industry, along with possible dairy development, holds forth great promise. In fact, Mr. Crampton stated that he was going to immediately increase his sheep, as they are not only a profitable line of effort, but particularly adapted to the conditions such as exist in that country. We also observed several other bands of sheep in that district existing under the usual range-run conditions.

As to the most likely market, or the best market for the agricultural products which are and which will be produced in Northern Lake County—I would say that, speaking of the livestock, particularly sheep, that the larger part of the lambs could easily move into Idaho, due to the fact that, as I understand, the Idaho lambs

585 are early, being lambed in February, and they are mature and out of the way, while the Lake County lambs, that is, the large percentage of them, at least, are feeder lambs, and there is demand in Idaho for these. I would say at least 50 per cent of the lamb crop of Lake County would be tributary to this cross-State line, due to the fact that they range in the northern part of the county. I have these figures from data compiled by our Chamber of Commerce recently. (1068.)

As to the market for other products: The seed crops, I believe that this area, the Fort Rock country, and Christmas Lake County, particularly, under irrigation would develop into a seed country, alfalfa and clover seed, probably peas. Those crops find an outlet largely in the south and east. The possibility of raising certified seed potatoes is also a hopeful one. The fact that it is a new country and there are no diseases in there makes it particularly adapted to that. Probably a large part of those would move to California, as there is now a demand in California for northern grown seed potatoes.

Mr. McCULLOCH. With the further drilling of wells in northern Lake County, and the construction of the proposed cross-State line, what, in your judgment, would be within the realm of reasonable possibility and probability in the way of an expansion and extension of the livestock and sheep-growing industry of northern Lake County?

A. Well, on the basis of some comparisons I made with conditions around Lakeview, I compiled some figures that are almost unbelievable. I might be peltered if I stated them. In that con-
586 nection I might enlarge upon what I stated a moment ago, regarding the passenger excursion that was held out of Lakeview on the 20th of June by our county agent and (1069) State agent leader, Mr. Ballard.

In the last three or four years, in the territory adjacent to Lakeview, there has been some most fine developments in the way of pasture crops, conditions that, as Mr. Ballard stated, are proving eastern Oregon at this time to be a country that is going to develop to compare with the Tillamook country in dairying, for this reason, we raise an excellent quality of alfalfa hay which is suited for use in feeding of dairy cows during the winter months. Further, that during the summer months, at this particular season, as observation tells you, all the pastures in the Willamette Valley are dried, cows have no green feed.

The territory around Lakeview—one particular place that he visited was Mr. Bradley's, three miles west of Lakeview. He sowed seven and one-half acres of yellow sweet clover. In addition to that he has four and one-half acres of mixed pasture grass, making a total of 12 acres. On this 12 acres of ground he was pasturing 62 ewes and their lambs, 13 milk cows and seven horses, and they had plenty of feed. Now that was the 20th of June, and the pasture is in the same condition to-day.

On the C. W. Ogle ranch, located four miles west of Lakeview, and two miles north, Mr. Ogle had a field of eight acres in Alsike clover, orchard grass, red-top grass, mixed. This (1070) pasture was irrigated. In a field, not adjoining, but about 20 rods distance from the ones irrigated, he had eight acres of non-irrigated
587 yellow sweet clover. This was a field some three years old. In these two fields of eight acres each there were 27 head of grown stock—I believe 20 cows and seven head of horses. The Alsike clover was knee-high in places over this pasture, the stock not being able to begin to feed it down. The same condition existed in the yellow sweet clover patch, and I put this question to Mr. Ballard: "There's 27 head of stock in this field. What would you say this pasture would carry, the sixteen acres?" He said, "Easily fifty-four head."

We visited another place, on the Smith Brothers' ranch. Smith Brothers had five acres of mixed pasture grasses under irrigation. They had 14 head of milk cows in the five acres, and there was plenty

of feed. There was grass in patches all over that pasture from six to eight inches high, green clover for pasture, Lodino clover and other mixed grasses.

Another ranch we visited was that of George Stockburn. He had 11½ acres in Lodino clover, bromegrass, Italian blue grass, and tall meadow oats. In addition to this was about three acres of hillside blue grass. In this field there were 70 ewes and their lambs, and five dairy cattle. (1071.)

With the drilling of additional wells in northern Lake County, and with water from these wells available for the irrigation of such tracts of clover, alfalfa, and hay of different kinds as I have just described on these ranches around Lakeview, it is my judgment, from my knowledge of conditions in the county, that a similar production that would support sheep, cows, lambs, and such, could be maintained in northern Lake County, as those I have just described around Lakeview, for the reason that samples of alfalfa that I have here, as well as this bromegrass, and also the few stray
588 plants of sweet clover I saw growing on John Ernst's ranch, indicates to me that the conditions are very similar.

In my judgment with the drilling of additional wells in northern Lake County, and the construction of this cross-State line, there is opportunity for an extensive enlargement and development of the livestock and feed growing industry, and coupled with that is the fact that by raising feed and such pasture grass as necessary for the farm flocks it would be greatly augmented by the stock that can range in the open country by reason of having feed available for the winter. I believe that such development would come with the construction of this cross-State railroad. (1072.)

Q. (By Mr. DUNCAN.) Mr. Nolte, in your direct examination you made some reference to the Strahorn railroads that were initiated in 1916, I believe. As I understand the Strahorn plan, it was a plan by which he hoped to connect up the dead ends of lines that terminated at Crane, Lakeview, Klamath Falls and Bend, through the construction of a railroad practically identical with the line that we are petitioning for; is that correct.

A. Practically so. He only started construction at one point, Klamath Falls. He extended approximately 40 miles to Sprague River. That line was later jointly acquired by the Great Northern and Southern Pacific. That line is now being extended to a point at Bly, Oregon, in Klamath County.

Q. Now, is the rest of the Strahorn program being continued or not? (1073.) Is he still working upon that plan that he formerly had?

A. There is no assurance that such is the case. As I
589 understand, in the decision permitting the purchase by the Southern Pacific and Great Northern of this Sprague River line the conditions were such that it should not be extended beyond the Goose Lake or the Chewaucan water sheds, that that territory

should not be molested, but be reserved for the development by the N.-C.-O. Railroad. However, at this time there is an unfavorable move on. I understand the Iwauna Box Company, of Klamath Falls, is negotiating for the purchase of the Booth tract, which lies partly in the Goose Lake Basin, and they might very easily extend from Bly over into the Goose Lake Basin and tap the timber from that point. It would be with a logging line. It would be very detrimental to the best interests of Lake County. I understand Mr. Strahorn as possible developer of that territory has passed out of the picture. We can look for no relief from a completion of the original Strahorn plan. (1074.) The Strahorn plan did not exactly contemplate this line from Crane over to Crexcent Lake. His project started at Bend, one line running from Bend southeasterly through Millican to Crane. At a point near Millican the line turned south, Silver Lake being the junction, one branch going to Lakeview and the other to Klamath Falls.

Q. That, however, all traversed east and west this high desert that has been mentioned?

A. Practically the same thing, any more than passing a little farther to the north than the original Union Pacific cross-State survey.

590 Cross-examination:

Q. (By Mr. Spencer.) Where are those national forest administered, the Fremont National Forest, that includes two-fifths of the available timber in Lake County? At Lakeview or here?

A. Well, there is a resident supervisor, and the general office is located here in Portland, I understand.

Q. Now, adjoining them on the west and south, is that the tract that you refer to that the Iwauna Box people are (1075) purchasing from Booth?

A. That would be in the Quartz Mountain area. The Booth tract is outside of the forest largely. A little of it is inside of the forest. It joins the forest. It seems to indicate that it is headed for Klamath Falls. If that is cut and harvested it isn't likely the probable harvesting of the Government timber would follow in the same way, for the reason that the Government's plan of operation is for 50-year working cycle, and it isn't likely that a concern of that class would want to prolong their operations in that area for that length of time. Nevertheless, the loss of that tract of timber would be of some consequence so far as benefits to Lake County that might accrue otherwise.

As to what the Government policy is about selling that timber, or whether there is any prospective buyer, or when it might be ready to market, I do know this, that they have made cruises of several tracts upon the hope or promise of prespective operators. For instance, the Warner unit, east of Lakeview, was cruised (1076) several years ago under the request of a prospective operator, and

then conditions didn't come about that were anticipated, namely, the standardization of the N.-C.-O., so the unit wasn't offered
591 for sale. The standardization of the N.-C.-O. has been in progress about a year and a half or two years. It was completed here last May. No additional mills have gone into Lakeview. The elevation in Goose Lake Valley and Lakeview there is 4,700 to 4,800, through the valley. It is somewhat in a basin, protected even to the extent that it raises fruits like apricots, and I even ate ripe peaches the last day of July in Goose Lake Valley, grown in the valley. I don't claim any such condition as that obtains up there in the Fort Rock Valley, but the Fort Rock Valley is some 500 feet lower (1077) than the Goose Lake Valley. As to it suffering more from frost than any location in central Oregon, I must answer this by saying that this particular potato patch as illustrated in the exhibit as being on the John Ernst ranch doesn't show any indication of frost. Yesterday coming into the Klamath Basin from Lakeview to take the train for Portland last night I noticed numerous potato patches that had the tops of the vines burned down for two inches by frost. That was in the country between Olene and Dairy and Bonanza, in the Klamath Basin, at an elevation of some 4,000 feet. So in the matter of making comparisons I don't believe that that situation or illustration you were making there would hardly apply, because sometimes there are other conditions that enter into it, and the fact of the Fort Rock Valley being some 500 feet lower than the Goose Lake Valley, possibly that would tend to ward off or retard frost.

As to Fort Rock Valley having the reputation of being afflicted with killing frosts more than any valley in the central Oregon country, I would say that that was an erroneous term applied to it, as far as that goes. That might be due to a large extent to
592 the fact that it is undeveloped, as it has been proven in (1078) districts that have been developed, the removal of the sagebrush, the killing of the soil, your soil is warmer, it retains the heat of the sun in the daytime and it will stand a colder temperature at night.

Q. You mentioned the barriers that you encounter in going west from Fort Rock, or your counsel inquired of natural barriers that were encountered. Is that the condition there?

A. Well, my statement was this, it wasn't so much the barrier of altitude as it was one of climatic conditions which rendered it impassable in the winter, as due to excessive precipitation in that area, because there are no excessive grades between the Fort Rock country and that area you refer to.

Exam. ROGERS. Somebody said the other day the plumbing froze up at Odell Lake.

Mr. SPENCER. I noticed an article in the paper—I don't know whether Mr. Dey did or not— that the lake up there at Crescent Lake actually froze over here three or four nights ago.

A. Well, that is true. I can report to you that around Lakeview out in the forest areas, there was an ice formed last month, and yet that doesn't mean that it formed down in the valley. There would be a difference of elevations that would apply to the lake that Mr. Rogers spoke about, conditions up in the mountains possibly 1,500 feet higher than the Fort Rock Valley. Conditions in that area are very peculiar in that (1079) regard. Take it in the high elevations you will find frost, down in the valleys you won't.

Q. I am reading from Exhibit 16, prepared by Mr. Newell, page 143: "I have selected a point on the Oregon Trunk 41 miles
593 south of Bend"—I suppose that means the Great Northern; the Oregon Trunk doesn't extend south of Bend—"which I have called Walker Junction, and which would be connected with Crescent Lake station by a water grade line about 26 miles long following Crescent Lake. Its construction would present no unusual difficulties." Now, the construction is less difficult east of that junction than it is west of it, isn't it?

A. If you will refer to my statement, Mr. Spencer, you will see that I said that the particular barrier was the amount of precipitation in that area and not the elevation or grades encountered. I am perfectly familiar with that country, and I am aware that there are no grades through there. It is a very easy country to get through. But I have been through there in the winter time in an automobile, where you have water and mud two feet and a half deep, and you are breaking your chains every little distance.

You can go practically in a direct line from Fort Rock to the Great Northern Railway, but it isn't reasonable or practicable to presume that (1080) any farmer in this day and age of the world is going to be expected to drive 40 or 50 or 60 miles to a point to carry on his trade relations with the outside world.

Q. Well, 40 miles isn't so far for a stock operation, is it?

A. Yes; but we are not presuming that the development in this Fort Rock area is going to be confined to stock that you drive out on the hoof.

Q. Well, there isn't any substantial livestock operation in the Fort Rock Valley, is there?

A. I might state that Mr. Ernst has as fine a herd of Holstein cattle as I have seen anywhere in central Oregon, building
594 up a very fine herd of milk cows. He had between 200 and 300 head of very fine leghorn chickens and they were laying hens, too. Now, butterfat, and eggs, and things of that kind, productions of that kind, it isn't practical to haul them that distance. Along with the fact, too, that his incoming produce naturally would have to be carted over the same distance, and he would be at the extreme west side of that district. Those living further east would have 50 or 60 miles that they would be expected to travel to market.

Q. Well, it is about 25 miles from Fort Rock, 24 or 25 miles, to the Great Northern line, isn't it?

A. It is? Well, I didn't know the exact distance. I think I said this morning 40 miles. Twenty-five to Fort Rock, and, say, 7 to Ernsts, is 32 miles. (1081.)

Beef cattle and sheep can not be raised in there in large quantities for the very reason that there is a tendency on the part of prospective settlers now to desire to locate where there are transportation facilities and all the other modern conveniences that go with modern railroads, and for that reason it isn't likely that they could be induced to settle out in there 40 or 50 miles from a railroad. We have that illustration very clearly demonstrated in the Goose Lake Valley. Our best ranchers are located within 3 to 10 miles of town, and you go out 20, 25 miles, where you have got soil, water, and climatic conditions equally as favorable and you don't find the successful farmer that you do around closer to town. Now, he evidently appreciates or realizes that condition as his reason for locating there.

595 I have understood that the John Day Valley and in the areas east of Prineville, on up into the Bear Valley, along that ridge and in those valleys between Seneca and Prineville, and in the John Day country and in the Antelope country, the Crooked River district, was considered a good cattle country.

Q. Yes; and they drive 70 to 100 miles? (1082.)

A. The conditions are different to this extent—that area, while I haven't been over all of it I have been over part of that particular part of Oregon—the country there is rolling hills, largely, rolling grass country, you might say; it isn't a soil, outside of a few places, possibly, where they are raising wheat, that could at all be compared with this Fort Rock country. Soil conditions in the Fort Rock Valley are very similar to those that are found in the irrigated sections of Idaho. You have got your volcanic ash, and you have got your pumice, and you have got your loam soils, whereas my observation in the country you refer to is that it is a heavier type of soil and not adapted under any conditions or circumstance to agricultural pursuits, such as tilling the soil, excepting a few of the little valleys, so it appears to me to be a different condition.

I have never spent a great deal of time in the Fort Rock Valley. I visit that valley probably two or three or four times a year. In earlier days they attempted to grow wheat in there. I have seen some as fine Bluestem wheat as grown anywhere grown out in that Fort Rock country. I recall when I first came to Lakeview of a man named Remington presenting an exhibit at the county fair, Bluestem wheat that was as good as grown anywhere in nonirrigated country. The reason they are not growing it there at the

596 present time is (1038) that the people moved out when their hopes were blasted as a result of the failure of the cross-State line to build, coupled with the extreme drought that followed in the last eight or 10 years. The Christmas Lake is practically all dried up. There is a little water in it now, but it is coming back again.

Q. Well, you say these cabins were built in connection with the cross-State line. Weren't there more of those cabins built when the Great Northern and the Northern Pacific went with the Oregon Trunk into Bend than any other time? That was the time of the settlement and——

A. No; I think not. Your survey was made in 1906 or '07, wasn't it?

Q. 1907.

A. 1907?

Q. Yes.

Exam. ROGERS. When was this Great Northern built?

Mr. SPENCER. 1911 the line was opened for operation into (1084) Bend by the northern lines and by the Oregon-Washington Railroad and Navigation Company.

On our trip through the valley we stopped to eat our lunch at one of these deserted cabins, and I took some pictures of several of them around. In this particular locality there were four places that the buildings were quite close together. The one where we ate our lunch, after we were through eating we prowled around through this deserted house, and we observed on book shelves in one of the buildings a pile of school books, and I opened a book and read in there the name of the student, "Ora Wagner, Fort Rock, Oregon, December, 1908," so that would prove that those people, at least, were there prior to this extension of the Great Northern in 1911.

597 Q. I am not saying that there didn't any of them go in there, or suggesting that, but I didn't know but you might know the fact or recall that when the railroads went into Bend they extensively advertised this Fort Rock Valley and the country around Bend there in an endeavor to get settlers in there, and they did get them in there, and the dry farming failed.

A. No; I think it was before that, because I know of a few cases—now, here is one in particular: Mrs. Harry Crampton, I understand, was at one time a stenographer in the Union Pacific Railroad, and she acted on a tip and went out and took a homestead. That is what I was told Sunday when we were up (1085) there.

There wasn't any secrecy about that cross-State line, of the survey, or the construction into Bend, that I know of.

Q. The only criticism that could be made was the fact that the railroads urged settlement of this land they had entered with their rails?

A. Well, I don't believe that anyone would be justified in criticizing the railroads for not building by reason of the fact of their having gone out and taken a homestead, Mr. Spencer, that wasn't the point I was getting at, because they were just gambling with the possible chance that the road might be built.

Q. And referring further to that Fort Rock country, which you say is 30 or 40 miles from a railroad now, that distance isn't comparable with the distances here some years ago when they used to haul into the Columbia River 40 miles by team, is it (1086) 50 miles?

A. No; but you have got to meet the competition of others who are living in more favorable circumstances, and when you
598 do, why, they naturally expect similar conditions to work under. I wouldn't say there isn't any trucking in at all from any direction from this Fort Rock country.

Q. Now, are you ready to compare this valley with the Goose Lake Valley, as far as agricultural possibilities are concerned?

A. Well, I wouldn't say so as a whole, but on the comparison that I made relative to alfalfa and pasture grasses I would. I feel that hardy ever-bearing fruits, such as strawberries, possibly ever-bearing raspberries, and plants of that kind can be grown in that valley, but I wouldn't say out in the valley that you could raise peaches, although there are sections around the foot of the Connley hills that you might.

Four billion feet of timber in Lake County is the figure usually quoted and been compiled by data that the chamber of commerce has used in various instances. (1087.) That is presumed to be pine timber.

Q. Now, here is a map, Exhibit No. 17, that Mr. Newell has prepared. Those stars are supposed to represent timber, each star 50 million feet. Looking at Lake County does that appear to be about right as to where the timber is located in that county?

A. I should judge so. That timber in Lake County which is reasonably near the cross-State line is located in the north end of the county.

The line drawn west from Fort Rock and north is in the Deschutes forest. I understand there is a logging road now out in that area. Quite likely that will be milled up at Bend. It is less than 65 miles away. (1088.)

599 Q. Yes; 55 miles from this junction of the proposed cross-State line with the Great Northern up to Bend. Now, the rest of the timber in the western edge of the county is as near the Cascade line, or Natron cut-off, as it is to Silver Lake, isn't it?

A. No; I wouldn't say so. It is closer to Silver Lake.

Q. Is this Silver Lake down here? What lake is that?

A. That is Summer Lake. Here is Silver Lake. Here is the town of Silver Lake here. The bulk of it is near to the Natron cut-off, but just as stated previously, the policy of the forest service is that this timber will be milled in Lake County, where it is grown, where it should be milled, and the chamber of commerce is going to back that up and see that it is so milled.

Q. Is your chamber of commerce going to challenge the policy of the U. S. Forestry Service about these things?

A. The policy of the U. S. Forestry Service has already been announced.

Q. In other words, it is their policy to mill it in the county, regardless of natural milling sites?

A. Not when there are milling sites available right within that area where the timber lies. We have got a much more favorable

milling condition at Silver Lake than you have got (1089) at Klamath Falls. You have got a dry pine country there. You are not bothered with the damp condition that prevails around the lakes at Klamath. They tell me that their lumber "blues" at Klamath, and that couldn't possibly be the condition at Silver Lake. (1090.)

Q. Well, when you point to Silver Lake, you point to that district that has snow and the mud, and so forth, in the winter, don't you?

600 A. I didn't mention that. I was mentioning the timber west of Sugar Pine Mountain to Fort Rock. Silver Lake lies in the open. There is no timber within probably three or four miles of Silver Lake. Silver Lake lies in an open flat with a half moon of timber surrounding it.

Q. Well, the timber is not nearly as dense around Silver Lake is it, as it is in the southern part of Lake County?

A. We found, in making our check of the timber west of Silver Lake numerous forties that run a million feet to the 40 acres. Some of the heaviest timber in Lake County is right north and west of Silver Lake.

Q. Well, in any event, you agree that this map about correctly shows the location of the timber that you have been talking about?

A. Well, I don't as to number of thousands or millions of feet that you have indicated here, if that is what you desire to check.

Q. I am saying to you that Mr. Newell's testimony is that each star represents 50,000,000 feet.

A. I would like to ask you where Mr. Newell gets this cruise?

Q. I don't know.

A. Then I would not like to accept and say that is the (1091) condition of that map. It is quite likely that some of this timber in northwestern Lake County is going to be milled at Bend. But not any of that that I included in my statement this morning, or some two billion feet tributary to Silver Lake. As you recall, I said that area north of Fort Rock is not included in my estimate.

It would be a haul of about 110 miles for a logging railroad from Silver Lake down to Lakeview.

601 We expect milling operations to be put in on Goose Lake if we can secure a satisfactory rate to permit that development, but we are greatly handicapped at the present time in respect to the rates. Klamath Falls is 200 miles farther from Chicago than we are, and I understand under the rate adjustment now to go into effect September 9th we are to secure the same rate to Chicago that Klamath has, Klamath having a 200-mile longer haul; that our rate on box lumber into San Francisco is something like 5 cents a hundred, or will be under the new tariff, over Klamath Falls, with only an 80-mile longer haul. Coupled with that is the fact that our incoming freight pays a tariff of something like 70 or 80 per cent (1092) higher; that is, I mean on camp supplies, sawmill machinery, and so forth, into Lakeview as compared to Klamath Falls. That rate, therefore, would have a tendency to invite development in the

area say at Klamath Falls or Alturas as against Lakeview, because of the rate handicap.

Klamath Falls is on the main line north and south, and we are out at Lakeview, at the extreme end of a branch line, and a long branch line, which until a few months ago was even a narrow gauge, but we are 200 miles closer to Chicago. Assuming we get a better rate adjustment later on we hope to have some milling operations to be carried on at Goose Lake. It should be quite a logical place for the milling of the timber of Lake County. That is the logical place to mill for all of it that lies east of the divide between Klamath and Lake Counties.

As to pulling any of that timber that lies west of the divide north and west of Lakeview over the hill into the Sycan—
602 it is conceded that the part of the Lake County timber in the Sycan will probably go into (1093) the Klamath area. But you noticed this morning when I gave these figures I did not include the Goose Lake and Warner units, some five billion feet, the Warner unit some billion and a half, excepting to say it might work in with part of the Paisley unit. It will some time be necessary, whether this cross-State line extends south into that Paisley area or whether the Southern Pacific extends north from Lakeview, to have a line into those districts. That is why I suggested the possibility of that working in with the plan, that the connection might be made from Lakeview north to the cross-State line.

Exam. ROGERS. Will it be necessary for the Southern Pacific to build into the timbered area, or would the timber move over to the Southern Pacific?

A. It is quite likely that the plan would be, if such were considered, that the Southern Pacific would have to build north, because the distance would be too great, and coupled with the fact there is other tonnage that would not figure with the timber; in other words, around Paisley in the valley there is some 80 thousand acres of land, and the Chewaucan Cattle Company alone has something over 200,000 acres under irrigation, susceptible to a very high state of development once it is subdivided and put under smaller ownership.

Q. (By Mr. DEY.) How much timber is there within 12 miles of Silver Lake?

Comr. MCMANAMY. In the interest of accuracy ought we not
(1094) also to take into consideration the fact that in Mr. Newell's testimony he said those stars represented some 60 billion less
603 timber than there is in the State; that that which is starred did not represent completely the timbered area of the State?

Mr. DEY. Well, he said it represented the timbered area wherever he put stars, as I understand it. There may be some timbered area where no stars appear, like in this district, and this district (indicating on exhibit), but wherever he attempted to show the timber he showed it all.

WITNESS. Did you ask me the question about the timber 12 miles from Silver Lake?

Mr. DEY. Yes; within a radius of 12 miles of Silver Lake.

A. I find that Silver Lake is about 14 miles from the west county line, and that Silver Lake unit extends about 14 or 15 miles south of Silver Lake; so taking into consideration that the Silver Lake unit has some two billion feet of pine, and also the fact that it has been proven that the cruises are underestimates of the actual timber there, likewise that the forest cruise was made some six or eight years ago, we could safely say that the cruise would be possibly 20 per cent in excess of what I have quoted. Therefore within 12 miles under those conditions and comparisons there are probably (1095) close to two billion feet of timber. That will run an operation, Mr. Dey, as I figured this morning, 200 carloads a year for 50 years, figuring 20,000 feet to the car, weighing 2,800 pounds to the thousand, or a 56,000-pound car.

Q. Then you figured on a production of lumber for this cross-State line of 2,000 cars a year?

A. It is quite reasonable to presume that following that development some of that Summer Lake timber would come in there. It is just a question of what development follows. If your line
604 should extend north, naturally it would divide it the other way. If the Union Pacific built the cross-State line or tapped the Silver Lake area they might even go down and tap part of the timber around Paisley.

Q. You don't look for more than 2,000 cars a year for the cross-State line from this district?

A. Well, that is not all the timber, not all the tonnage available to that line. On the basis that I compute that is this: That on a two billion count, on a 50-year cut—and I understand that is the working cycle of the Forest Service, under which they are going to operate their timber, and they own three-fifths (1096) of the timber in that particular district—it is reversed as compared to the other districts in the county—that there would be a 40 million yearly cut. Well, 40 millions at 20,000 to the car is 2,000 carloads of lumber.

I presume they possibly move 8,000 cars out of Bend each year. Out of Klamath Falls 10,000 to 12,000. I just forecast that from comments I have heard and news reports.

Q. Now you say that you want a connection with Portland, and you have cited here the distance that you now have to go to Portland, but you say nothing about the Alturas line which will soon afford you a line to Portland of fair directness, will it not?

A. Well, if it is built. We understood that an announcement was made and they started some men to work, and then they were pulled off. That was the last report we had here a few days ago. Of course there is no authenticity, possibly, to that. (1097.)

Q. Living right there in that community and being so anxious to get to Portland, you come here and testify that your
605 best information now is that the work on that line is not progressing?

A. No; I didn't attempt to say that, Mr. Dey. I wasn't attempting to discount your statement at all; I just simply said there were current reports that construction wasn't going ahead; not meaning that they didn't intend to go ahead. I didn't know the contracts are already let on part of it and the work is going ahead between Klamath Falls and Alturas.

Q. When it is built, and it is expected to be completed in May, what kind of route will it give you into Portland?

A. Well, it will give us a distance of about 420 odd miles as compared to 460 odd miles to San Francisco—420 odd miles, I believe it is, to Portland.

Q. As compared with your present railroad mileage to Portland, what will the mileage be by rail when the Alturas line is finished from Lakeview, the county seat of your county?

A. I don't recall what the distance is between Lakeview and Portland via Roseville—1,100 miles? Possibly you can tell me. I did not give it a while back. (1098.) I think it is 53 miles from Lakeview to Alturas. Then it is 100 miles to Klamath Falls.

Q. And then a direct line from Klamath Falls in here to Portland?

A. Rather indirect at that, though. We have the combination train 50 miles to Alturas to get onto it. Outside of the 53 miles that is required to get down to Alturas we have a very good route into Portland.

To come to this hearing yesterday I drove to Klamath Falls, took the train out of there at 10.30 last night. I was here this morning.

The Ernst ranch and the Parks ranch are the only two ranches in this Fort Rock country (1099) that are being developed,
606 except the Crampton ranch—let's see; Ernst, Crampton, Parks, and Sprague. There are four wells drilled by the State, and the four ranches are occupied. We didn't visit the Sprague well. That lies south and west of Fort Rock.

Q. And on the Ernst ranch there are 20 acres under cultivation, and on the Parks ranch 50; is that right?

A. No; the 20 acres on the Ernst ranch is in alfalfa. There is something over 50 acres in cultivation on the Ernst ranch.

I am familiar with the territory along the so-called Natron cutoff, from Kirk and all north. I have been over that road by automobile several times.

Exam. ROGERS. I was just wondering what that country affords in the way of traffic as compared to what you expect to offer this cross-State line. What I am talking about now is traffic originating on the line.

A. Right directly on the line, after a few miles north of Kirk it goes through a jack pine-pumice country. There is timber, though, off to the west of it. Along the immediate location of the line, there is not much timber directly tributary to that line. (1100.)

Exam. ROGERS. I wasn't confining it especially to timber; all commodities that originate, or that there is probability of originating on that line, as compared to the cross-State line.

A. Well, I am unable to state, not knowing the timber available to that line, but it is 90 per cent timber, I would say.

Redirect examination:

I drove from Lakeview over to Klamath Falls pretty close to 120 miles the way the stage line runs in coming up here. Lakeview is about 70 miles on an air line practically due east of Klamath Falls.

607 To get to Portland the all-rail route would be Lakeview to Wendel, Fernley, Roseville, Portland. At the present time you have to go clear down through Fernley and Roseville into California and then north to Portland by existing rail connection. (1101.)

Q. Now if you had from Lakeview the connection that you advocated of an extension of the N. C. O. to the cross-State line, that would put Lakeview with respect to Portland pretty nearly the same distance as Klamath Falls from Portland, wouldn't it?

A. Practically; possibly 25 miles further. That is, presuming that it went in to a point near Odell.

The building of the Alturas line will leave Lakeview 151 miles more distant from Portland than Klamath Falls.

Q. 100 miles from Klamath to Alturas and 51 from Lakeview to Alturas. Now, with the extension of, or the building of a cross-State line and with the construction of such logging roads as might reasonably be anticipated when the time comes for the milling of the timber in Lake County, is it your judgment that a large part of the timber resources of Lake County would find their rail outlet to eastern markets via the proposed cross-State line?

A. I don't see any reason why it should not. Compared on a mileage basis they should have an advantage in freight rates. (1102.) I believe it would. I believe if this cross-State line were built there would be an assured tonnage of forest products for at least 50 years, of at least 2,000 cars a year. That is the minimum estimate I make. It would exceed that minimum estimate, in my judgment, by extending south in the direction of Lakeview. That was from Lake County. That is the combination that I used, consolidation of the private timber with the forest timber in that Silver Lake unit.

When I say tonnage would be available to a cross-State line I

608 I mean only from that particular area at Silver Lake. Yes, only from Lake County. That is true from all of the timber resources of Lake County; and also it could easily take some of that timber that lies in the Deschutes Forest, the line of which runs north (1103) of Fort Rock. It would not take the construction of a very long logging line to tap that down to the cross-State line, because the line would pass through the timbered area west of Fort Rock, in the Fremont country.

Q. Now you mentioned the conditions being favorable around Silver Lake for milling this pine lumber. You said they were much more favorable than around Klamath Falls, where the excess of moisture caused the lumber to blue. What did you mean by that?

A. I mean simply this: That in piling green lumber, if they don't use the dry kiln method, that ofttimes the lumber will discolor before it is thoroughly dried. That is true of green pine lumber. On the Silver Lake area in particular it is in the open there, where they have a great many winds blowing from the south and it dries naturally. The conditions are exceptionally favorable around Silver Lake for air drying green pine lumber.

Recross examination:

I am assuming that this (1104) pine lumber from the Fremont National Forest will go to the cross-State line. But if the Southern Pacific should build up there it might not go to the cross-State line.

Q. Now do you think that if the Union Pacific should be ordered to build this cross-State line and build it with a view of getting that Fremont timber, that it would be very long before the Southern Pacific would head up in there with an extension of the Lakeview line, to hold that timber to its rails?

609 Exam. ROGERS. It would not head up there without a certificate, would it?

A. Probably they would be inclined to do it, but I believe that thing could be worked out between the two roads. It should be. I don't think that your road should be required to build that line unless that thing is adjusted, and I believe that is a part of this case, as I understand it.

Q. (By Mr. SPENCER.) Yes; now the examiner asked you what traffic originated north of Kirk and up to Oakridge there in the gap along that Southern Pacific line. Assuming that no traffic originates along there, the building of that gap tied up a railroad from either end that serves and has on its line the largest forest areas in the country, and practically all of the large producing mills in western Oregon; isn't that (1105) true?

A. Yes; but I would also add that if your line was 200 miles shorter you might likewise expect tonnage to compensate you for that construction.

Q. Now if you had been confronted with a condition for years where the timber, say, came right through your gateway, like Portland here off the Tillamook branch, and goes on by, you don't get any of it, do you think you would stand very much show of the diversion of the timber from the forest areas served by the Cascade line?

A. Well, I don't believe, Mr. Spencer, that the Interstate Commerce Commission would ask you to build that line unless they made adequate provision to take care of that particular situation.

I don't know the exact amount the Southern Pacific has spent in there, but a considerable sum.

610 Mr. DEY. Twenty million on that gap.

Exam. ROGERS. Do I understand you to say, Mr. Spencer, or rather put the presumption to the witness that there was no traffic originated on that line?

Mr. SPENCER. Between Oakridge and Kirk?

Exam. ROGERS. Yes.

Mr. SPENCER. I don't know what the fact is as to that. I am not familiar with that line and haven't been over it. (1106.)

Exam. ROGERS. The point I was getting at, I was just wondering whether that is true; whether it was possible to justify the construction of mileage at that expense without any traffic on the line, simply to bridge traffic. That would follow from your assumption, wouldn't it?

Mr. SPENCER. I think that the operation of the Southern Pacific would justify the construction of the line to date, because, as I understand it, practically all the heavy traffic goes over that line and is diverted from the old line.

Exam. ROGERS. I am not questioning that. The thought occurred to me that if all the presumptions were true, then it would be possible to justify the construction of mileage like that, at that cost, without any traffic originating on that portion of the line.

Mr. SPENCER. Well, if you have enough traffic at each end of the bridge, why, of course you can justfy the construction of a bridge; but the condition as we conceive it is that we will land on an abutment in a snow bank on the Cascade Mountains, if we are ordered to build that line. (1107.)

611 ROBERT M. DUNCAN was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct examination:

I live at Burns, Oregon, in Harney County. I have lived in Harney County since 1919. I have spent practically my entire life in Oregon, having moved to Oregon as a small boy in 1887. My active life, however, has been spent in eastern Oregon. I moved to Ontario, or, rather, to Malheur County, in 1907 and have resided in eastern Oregon continuously since that time, with the exception of two years. I am a lawyer. I am familiar with the conditions generally throughout eastern Oregon, and particularly in Harney County, with respect to transportation development, agricultural conditions, conditions affecting production, and in a general way, with the problems of marketing the products of those communities. I have made a very careful study and have made close observation of these problems and conditions for a (1108) period of more than 20 years. I have given particular study and attention to the project of this cross-State line, connecting Crane with Crescent Lake on the west. I was a witness in the former case in which the Public Service Commission of Oregon presented to the Interstate Commerce Commission a case in which they asked for the construction

of this line. I attended the entire hearing. I was a witness in that proceeding.

I have information respecting conditions generally in Harney County as they will be affected by the construction of this proposed cross-State line. I have made such a study and I desire to make that as a statement to the commission.

I appear here as attorney for Malheur, Harney, and Grant Counties as interveners in this case; also several of the commercial interests of that county. In addition to that I am in the employ and represent particularly the Eastern Oregon Livestock Company and the William Hanley Company two of (1109) the largest land owners in the State of Oregon. In giving my testimony here I am authorized to speak for those three counties and for the other interests that I have mentioned; the Ontario Commercial Club and the Burns Chamber of Commerce. However, in that respect I wish to say that I am not appearing as a witness on behalf of anyone except the interests from Harney County that have intervened in this case and the citizens generally of that county. I would like to state further that the reason for my appearance as a witness in this case is probably due to the fact that our county has never employed, or at least does not now employ a county agent, nor is there anyone in the county who has kept records or more accurate check upon the progress of the development of the county than myself. That has been largely a part of my work in Harney County as a lawyer.

Q. Now I wish you would go ahead and give such information as you have respecting the area, population and topograph of Harney County.

A. If I may, I would like to enlarge that question just a little bit, making the statement that Malheur, Harney, and Grant Counties, the three counties combined, have for administrative purposes in the State of Oregon heretofore been considered as one district, and it comprises the Ninth Judicial District of the State of Oregon, and the total area of those three counties (1110) is more than one-fourth the total area of the State of Oregon. That fact is not generally appreciated within the State, and I feel that I am justified in making the statement, so that the commission may understand that
613 this is a very large area that we are speaking of. As to Harney County alone, it has a total area in square miles of 9,620. That is a little in excess of one-tenth of the area of the State alone. That is in excess of six million acres, 6,357,120 acres being the generally accepted figures, and the figures of the General Land Office.

Harney is the largest county in the area in the State of Oregon, and one of the least populated counties of the State, by far the least populated comparatively as to size. Harney County is larger than the combined area of the States of Rhode Island, which has 1,250 square miles, Delaware with 2,050 square miles and Connecticut with 4,990 square miles, plus the District of Columbia with 70 square miles. It is also (1111) larger than the States of Massachusetts, New Hampshire, and New Jersey or Vermont.

Now the population of Harney County in 1920 was 3,992, according to Government census, which was less than the population in 1910, which was 4,059, showing a decrease. Our population in Harney County represents but one half of one per cent of the population of the State, as shown by the 1920 census, and is now even a smaller ratio of that population.

The population of the State at the 1920 census was 783,000, and it is now well above a million.

Taking the State of Rhode Island, with its population of 604,000, Harney County represents a population of but sixty-six hundredths of one per cent. Six-tenths of one per cent roughly; Delaware practically two per cent; Connecticut, two-tenths of one per cent; and Massachusetts (1112), 13 hundredths of one per cent. New Hampshire, it is 61 hundredths of one per cent; of New Jersey, 12 hundredths of one per cent; and Vermont it is one and 13
614 hundredths per cent; showing that we have a population, or, rather, we have 1,592 acres for each inhabitant, whereas Massachusetts has but 1.3 acres per inhabitant and Vermont has 17.3 acres per inhabitant.

Harney County generally, the large bulk of the county is an inland county, that has no drainage to the sea. The northeast corner of the county, however, does drain into the Malheur River; that is the Drewsey area. Now in the center of the county we have a mountain range called Steens Mountains, roughly 75 miles in length, that rises to an elevation of above 9,000 feet, and that is not a timbered mountain; there is no timber on the mountain of any kind. It is what we call an open grazing country, and the mountain is well watered. This mountain has probably the greatest reputation of any mountain area of its size in the West as a grazing ground. It is a wonderful grass producing mountain, well watered, and there is a vast live-stock population on that mountain. (1113.) On the north edge of the county we have the Blue Mountains. That is largely a timbered country and well watered. The central portion of the county is occupied by the Harney Valley. Harney Valley has an area of approximately 400,000 acres. It is watered by a stream from the north called Silvies River and several very much smaller streams that run in at different points, but they are negligible in its computation. The area of Harney Valley is 400,000 acres. In this valley at it lower elevation it is 4,100 feet. There is a lake of 47,000 acres, known as Malheur Lake. Connected with that is Harney Lake, with about half that area. But the two lakes are of entirely different character.

Now on the south side of Harney Lake we have the Blitzen Valley, which is watered by Blitzen River, from the Steens Mountains, and that valley is about, roughly 100,000 acres in extent, 90,000 acres of which we consider irrigated lands.

615 West of Burns we have another important valley, which is quite well watered, known as the Silver Creek Valley. Silver Creek Valley is divided into two parts, in the upper valley of which

there is now approximately 5,000 acres in irrigation, and lands adjacent to the irrigated land, making a total of about 18,000 acres on the upper valley. Then Silver Creek enters into a canyon about 7 miles long and opens into what we term (1114) the Warm Springs Valley, sometimes referred to as the Double-O Valley. The Warm Springs Valley has a total of approximately 24,000 acres, of which 18,000 acres is watered.

Now, I will refer later to the question of irrigation in these two areas, because I do not want to be understood as saying it is all under a perfect system of irrigation. It is not. However, I would like to explain that in its proper place.

Now, in the south portion of the county we have another valley that is very important to our country, known as the Catlow Valley. It is an area lying west of the Steens Mountain range that I mentioned, about 50 miles in length, running some 20 miles or more in width, approximately 500,000 acres in that valley that is level land, arid in character. The land is very fertile, but without any present source of gravity water supply for any considerable area. There are some small streams coming into that valley that I will mention under that heading, but it is not an irrigated valley, such as Harney Valley or the Blitzen Valley or the Silver Creek Valley. However, there have been some very successful dry-land crops grown in that valley and it has a potential development for agricultural purposes that is of considerable extent, but I am not mentioning that in this case, or claiming for Catlow (1115) Valley the slightest tonnage from an agricultural standpoint, but dealing with
616 it purely as a grazing ground for livestock. The northern part of the country is a timbered area, lying in the Blue Mountains. Strictly within Harney County, the elevation runs to about 6,500 feet. Then we drop over the summit into another valley, Silvies Valley, a portion of which is in Harney County, the greater portion being in Grant County, then the mountains continue to rise up to the Strawberry Mountain elevation of about 10,000 feet.

In the Blue Mountains the timber is the western yellow pine, Pondosa pine, and is all within the Malheur and the Ochoco Forest Reserves of this district. These forest reserves aord the very best summer range for cattle, sheep, or horses. Conditions are almost ideal for summer range for both cattle and sheep, and they are grazed there in large numbers.

The Steens Mountains have been used extensively, for more than 50 years, for grazing sheep and cattle and horses. (1116.)

Q. What would you say, just generally speaking now, the elevations of these various parts of the county were that you have described? What would you say the minimum elevation was and maximum elevation of these various localities in Harney County?

A. Well, exclusive of the Drewsey section, the general elevation of the valleys in Harney County is 4,100 feet. That is the elevation of Malheur Lake, and is also the elevation of the areas in the southeastern portion of the county, which we term the Alvord side of the

Steens Mountains. That seems to be the general level of all of those valleys. It varies, of course, probably 200 feet in the different valleys.

With respect to fertility, throughout Harney County, there is hardly any land in our county that, if it can be watered, will not produce the very best of crops that can be grown in that elevation. Naturally at that elevation we do not consider fruit or berries as a crop. We grow the hardy crops, the grains and the grasses, alfalfa predominating where the water can be controlled. (1117.)

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Development along the line of subterranean water is developing quite rapidly in the Harney Valley itself. There have been three experimental wells developed not far from Burns, and on the eastern edge of our irrigated area, and these have all so far proven very successful from the standpoint of water supply. Those wells find an abundance of underground water at a depth of about 60 to 65 feet. In going to that depth I would say that there are at least two flows of water encountered before they strike what they term the third flow of water, and the water from the third flow rises in the well to within about 15 feet of the surface. Pumping is under way in these wells, but after pumping the water is reduced to probably the 30-foot level and the average lift is about 30 feet, and after that depth has been reached, that is after the well is lowered to that depth, extensive tests have been conducted and it does not go beyond that point.

As to the subterranean water sources in the Catlow Valley in the southwest part of the county—that is a very interesting field and probably a very fertile field for experimentation as to artesian water. Now on the eastern edge of Catlow Valley there are several places where springs of very large size come out. The same thing is true on the western edge, where Hart Mountain produces some water through that source, and the United States Geological Service has reported that Catlow Valley offers a very promising field (1118) for the production of artesian water. However, there has been no experiment along that line, so we do not know what ultimate development there will be. Mr. G. A. Waring made that report in 1909.

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The subterranean sources of water supply in Harney County are gradually being ascertained and put to use; the wells that I mentioned, being the three wells near Burns, being put in within the last two years, possibly some work done three years ago but the principal work has been done within the past two years.

The largest area of land in Harney County of course is merely grazing land, but we have some considerable areas in that county that are irrigated lands, now irrigated and have been for many years. The land in Harney County produces large quantities of native grasses. The land in that elevation generally throughout eastern Oregon, and particularly in Harney County, produces the very finest quality of bunch grass, the native grass of this (1119) area, which

grows extensively on our ranges, and it has been a wonderful crop for the production of livestock in the past. That native grass is not cut and cured and put up for feeding to livestock, not that class of grass. That is on the ranges. Besides that native grass on the ranges that is not cut, there is a substantial production of hay in Harney County, at the present time and under present conditions. In Harney Valley itself on the Silvies River we have water rights and irrigated lands to the total of about 62,000 acres that are devoted to the production of hay, practically all of that being wild hay, the native wild grasses that grow on our meadows.

Q. Is the livestock industry the largest in Harney County?

A. Well, I would say it is the only active pursuit in Harney County at the present time. We are developing other industries, and within the past two years there have been some shipments of agricultural crops from our country, and it has only been within the past two years there has been any appreciable amount shipped from the county.

619 The hay on those 62,000 acres is cut. Not all of it is cut every year; some of it (1120) is pastured off each year, but there are thousands and thousands of acres cut every year. The average yield is about one ton to the acre. In that area, Mr. Examiner, there are a few hundred acres, probably a total of 1,000 acres, devoted to alfalfa, the rest of it being wild hay. The wild hay produces an average of a ton to an acre, but it does run from a half ton to two tons to the acre. Alfalfa yields an average of about three and a half to four tons to the acre with the methods under which it is handled there at the present time in that area.

There is opportunity for extensive extension of the livestock industry in Harney County over its present volume and extent. (1121.)

I have the figures for the unappropriated Government lands subject to entry. I can give you the classification of the lands in the county very rapidly. The unappropriated Government lands—that means lands that are now on the public range—amount to 3,541,653 acres, as shown by the Government reports. In addition to that there is unsurveyed Government lands, the former land being surveyed, of 35,791 acres. And in the forest reserve within Harney County 518,900 acres. Now there are entries of Government land which are pending before the department and have not ripened into title, of 563,409 acres. Permit me to say, however, that figure varies from time to time and may not be entirely accurate, but it is within a small acreage of the exact number.

Now the State school lands of Oregon amount to 180,000 acres of land scattered throughout the county, and in private lands

620 showing upon the tax roll of the county we have classified as tillable, and in that classificaiton the county assessor classifies almost exclusively the irrigated or semi-irrigated lands to the extent of 257,561 acres, and as non-tillable lands, which are grazing lands in private ownership, 1,259,824 acres, making the total for the county as shown by Government report.

When I went to Harney County in 1919 I was assigned certain work and went there primarily for the purpose of assisting in the development or the organization of some irrigation districts (1122) for the development of our irrigated lands. We, in 1920, organized Harney Valley, the irrigated area only, into an irrigation district. The total area in that district is 83,040 acres. Under irrigation within that district there are 61,230 acres that have an adjudicated water right. That land is all under cultivation in the sense in which we refer to cultivation in Harney County; that is, it is producing hay or irrigated pasture for livestock. Now when I say it is cultivated land, I don't mean it is farmed to the ordinary farm crops as they would refer to cultivated land in any other county. The plan of reclamation in that district is to store the waters of Silvies River in reservoirs on that stream and ultimately change the system of irrigation from that now in use, which merely utilizes the flood flow as it comes down during the freshet season in the spring of the year, spreading it over the lands by means of dams and dikes, and change that to a more scientific method of irrigation, by bringing the water from the reservoirs during the irrigation season.

We have made our plans for the development of that county by irrigation, or through irrigation, so that the lands that
621 are now in large ownership could be broken up and sold, and the county settled by the smaller settlers, and it was (1123) anticipated at the time I undertook this work and these projects were put under way that by the time we were ready with our projects that railroad transportation would be available so that we could go ahead with our development. It was primarily to put ourselves into a position so that when the development came through railroad transportation to the west we could immediately go ahead with the development of the county.

The studies that the Harney Valley irrigation district had made by competent engineers—I might say that we spent in excess of $80,000 for our surveys and in the preparation of our plans for the completion, or, rather, to begin work on that project, to begin the actual work. We spent over $80,000 in digging test wells and in laying out canals and in preparing plans for dam sites. The test wells I mentioned were upon the dam sites to determine foundation conditions. Now we went a little further than that. After we spent that $80,000 to determine the feasible plan of irrigation on that district, we found the cost of the district, what it would cost us to reclaim it, and the district has voted bonds to the extent of $2,200,000 for the purpose of perfecting the plan that our engineers prepared. That bond was authorized by the people, but has not been sold, and we have made no effort to sell it because conditions are not such that we could (1124) possibly do so.

Now in connection with the irrigation development of that county, experiments of the Harney County branch experimental station of the Oregon Agricultural College, we believe, have proven conclu-

sively that we have probably the highest duty possible for water in that country. The average crop that in the Snake
622 River Valley would require three to three and a half acre feet for production, with us we will produce with not to exceed 18 inches for alfalfa, and our grain crops do not require in excess of 12 inches of water and have been very successfully grown with a much less quantity of water than that—as low as 8 inches having produced profitable crops. I should probably say not profitable crops but maximum yields.

Generally speaking we do not irrigate, or would not irrigate before the first of May, under a controlled irrigation scheme, but from May 1st to July 15th will produce our best crops and best results.

As to the source of the water for this Harney Valley irrigation district—Silvies River, with its tributaries of Emigrant Creek, and the source of this water is from the Blue Mountains, and largely a large part of it comes from Grant County, the southern slopes of the Blue Mountains in (1125) Grant County draining into Harney County. We planned the storage of all the run-off of the stream from Silvies River. And that is an average of 140,000 acre feet that would be stored. The run-off of course in some years is much in excess of that, other years a little less; but we planned through the district an average annual storage and use of 140,000 acre feet.

The bond issue I mentioned was authorized to provide the cost of the dam site and of the distribution system.

I can give the figure of the cost per acre on the 61,000 acres now under water and in production. The cost of that was used and computed upon the basis of 61,000 acres, which is the present irrigated area of the lands within that district. Now there is 83,000 acres within the district, but the cost was distributed, not over
623 the entire district but over the irrigated lands only, and the estimate of our engineers was that the storage would cost $10.00 per acre foot. Now allowing a storage quantity of two and a half acre feet per acre would make the storage cost $25.00 per acre, and a distribution cost in proportion to the (1126) 61,000 acres was $13.50; total $38.50 for the water right.

The maximum duty of water in that district delivered at the land would be 18 inches, or one and one-half acre feet during the irrigating season, May 1st to July 15th.

It is necessary in Harney County to provide hay for winter feed for livestock. You can not successfully continue in the livestock business in Harney County without ample winter feed for livestock.

Q. When the surface waters in Harney County were first utilized how was it done; by storage and distribution, or not?

A. No; on the countrary, irrigation has developed gradually throughout Harney County. When the first settlers came into the county they found the lands that are now meadow lands and cutting hay, growing a different kind of hay, but it was all wet through swamps and swales and sloughs that penetrated the country. This

area absorbed the spring freshets and produced rather a coarse grass. Now when they came into the county, of course in small numbers and with a small amount of stock, hay was not required for feed purposes to the extent that it is to-day. Their cattle would wander in these swamps, if you term them such, but in this coarse hay, tule, and sugar grass, annually they would cut enough hay for their horses, saddle animals, for their older cows and their sick animals (1127), until they just gradually increased that, until now they have utilized the entire freshets flow from all of the streams in the county and are using that overflow land for the production of hay, the
624 largest portion of which is cut for hay and cured, some of which, however, is pastured off in the fall months and during the winter months. Now this development has changed the growth in this area, and instead of being the coarse tule, rough hay that they had in the early days, they have a very fine grade of a natural wild hay, red top, some timothy, in other areas considerable quantities of sugar grass, and it is a very desirable quality of hay produced under those conditions.

As to the latest date in the spring that water is available from the spring freshets in Silvies River and other streams for flooding the adjacent lands, that varies considerably with the year. However, I would say that there is always water up until the first of June, and in favorable seasons, I would say average seasons, the water continues in good quantity up until June 15th. But from June 15th on the water fails very rapidly and we are fortunate to have sufficient water to divert from the streams to more distant lands even for stock purposes after that. Some years, however, there is a good flow of water in the stream up until the 15th of July. This year the water continued in the streams (1128) in good quantities until after the first of July and was diverted considerable distances for stock water. There was no irrigation after that date.

As to the Blitzen River reclamation district, practically the same course is pursued on the Blitzen River. On the Blizten River we have a little different condition from that in Harney Valley, and in 1921 the Blitzen River reclamation district was organized as distinguished from an irrigation district in Harney County. I would say that that was done, however, for the purpose that our problem could best be worked out through a reclamation district rather
625 than through an irrigation district on that area. Drainage was necessary over there originally, and a considerable drainage works had to be constructed before the reclamation of the land could be undertaken through irrigation. Now, we organized that as a reclamation district with a total area of 60,000 acres. Now there is in production in that district under water, irrigated annually, 34,650 acres by actual measurement, by survey. (1129.) The entire 60,000 acres within that district, however, is irrigated, with the possible exception of 1,200 or 1,500 acres; I don't have the exact figures. This includes or contemplates in the construction of this reservoir the flooding of about 12,000 acres of land that is now in

production of meadow grasses, it being necessary to build the dam at a point where it would flood some of the meadows that the company now owns.

Now, we went through the same process in that district. We employed competent engineers, the best obtainable, and prepared plans for the storage of our water and the distribution of the water after it was stored, and the drainage of the land, so that we could take care of any drainage problem that might arise. The cost of that was in excess of $25,000. I am not able to give the exact figures of the cost of that, because some of that work had been done several years before and was assembled and we worked it into the data that we prepared for that district.

As to the source of the water supply for that district—this project takes the water of Blitzen River, which comes off of Steens Mountain. That is an extremely dependable source of supply. We have conditions there probably not necessary to discuss, that make it a much more desirable stream than the Silvies River on the north. (1130.)

626 I mentioned this was a reclamation district. Under the Oregon law we have two kinds of districts that we use in our country; one is an irrigation district, which contemplates merely the storage and distribution of water, and the other is a reclamation district, which primarily contemplates the drainage of an area and its subsequent reclamation by proper method of controlled irrigation. This Blitzen River reclamation district was formed for the purpose of carrying out that last object that I mentioned. The law is a little bit different in relation to the two districts. And I might say this, so that there will be no misunderstanding on that score. All the land in the Blitzen River reclamation district is owned by one company, except three small tracts which are in the hands of the directors, primarily to qualify them as directors of the company. It is the property of the Eastern Oregon Livestock Company.

The ascertained cost per acre on these 34,650 acres now in production, including drainage, storage and distribution system, is $25.00 an acre. The irrigation season in this district is the same as on the Silvies Valley, May 1st to July 15th (1131.) The duty of water in this district is the same as in the Harney Valley. There might be, with development, a little more, probably 25 per cent more required on the Blitzen Valley, due to the character of the soil, than on the Silvies Valley, but we believe not. We think that the same duty, 18 inches delivered at the land, will be sufficient for a maximum crop.

I am not connected with the organization of the Silver Creek irrigation district, but I have information from authentic sources regarding it. It was organized in 1918. It is located on Silver Creek—the center of the district is about 35 miles west of

627 Burns. It is in the northwestern portion of the county. The area in the district is 18,300 acres. (1132.) We consider the irrigable portion at 16,000 acres. That is the area which, if water could be supplied to it, would be suitable for the production of crops;

that is, high class land. There is 3,400 acres now within that district alone that is irrigated from Silver Creek. Now the district does not include even all the upper valley of Silver Creek and lying below that, and irrigated lands from the stream and now having water rights will increase that to about 5,500 acres. I don't have the exact figures but it is about 5,500 acres on Upper Silver Creek.

These 3,400 acres now under water are strictly devoted to the production of hay; some alfalfa, principally wild hay. There is some grain, but that is a very minor crop. There are a few hundred acres that are planted to barley and rye, but that is an incidental crop on the stream. However, there has been enough raised there to demonstrate that it is a high class grain country, if there was any occasion for growing it in quantities.

As to the amount of the water storage from the waters of Silver Creek, the contemplation was that they would store 40,000 acre feet, and they have a reservoir site which is adaptable to the storage of that amount of water, and it is a high class reservoir site.

The estimated cost of the Silver Creek storage dam was $300,000, and the distribution system was estimated at $185,000. Now that estimate was made in 1918, and I believe it is possibly 10 to 15 per cent below what an estimate at the present time would show the cost would be.

The maximum duty of water in that stream for the crops that we grow in our country, delivered at the land, would be 18 inches to produce the best of crops. But the district has allowed up to
628 30 inches for the production of some crops.

The irrigation season is the same thing as in the other districts, May 1st to July 15th. The cost per acre is estimated at $65.00 per acre for the complete project, that is, for putting 16,000 acres under water.

The Trout Creek irrigation district was (1134) organized in 1922. It is located on Trout Creek in the southeastern portion of Harney County, about, I would say, 150 miles south and slightly east of Crane. There are 2,600 acres included in that district. (1135.) I don't want to go into too much detail. I do want to get these facts into the record. Of the Trout Creek irrigation district there has been under cultivation for a good many years 1,400 acres of land. This 1,400 acres of land is producing practically the same kind of production as the other districts that I have mentioned, have grown grain successfully, and some alfalfa hay, in that district. They retain for storage in that district 10,000 acre-feet of water, which will bring in cultivation the full 2,600 acres, and the cost of that storage and the distribution system is about $290,000.00, roughly, and the cost will be, roughly, $55.00 an acre when they bring into production the remaining lands that can be irrigated from that storage.

Now the district proposed in that instance, and organized on the basis of 2,600 acres, proposes to irrigate about 6,600 acres that lie in the same valley, all of which is very high class land, and with

the 6,600 acres in the project sharing in the cost it would amount to about $55.00 an acre. This irrigation is well away from the present railroad terminal at Crane, or railroad line at Crane,
629 and is treated a little differently from—in my general view of conditions in that county, from the other districts that I have mentioned, because they are directly on the railroad we propose.

Now, in addition to these irrigation projects, I just want to mention the fact that in Harney County on the branch line (1136) that now exists running up to Crane we are closed to the Jordan Valley project in Malheur County than any point that has been mentioned. That hasn't been brought out in the testimony of any other witness, as I remember. We are approximately 65 miles from the center of the Jordan Valley irrigation district at Venator, and there has been quite a bit of trucking and freighting across country to the Jordan Valley project from our country. I merely mention that for the purpose of showing that if in the event this cross-State line is built it is extremely reasonable to presume that much of the western bound movement of produce from the Jordan Valley project will come out by way of Harney County.

As to the acreage in the Jordan Valley project, that has varied so much that I am unable to say just now what they plan to reclaim. They have had several problems over there in the last two years that I haven't kept track of. I think, however, that it is safe to say that there will be within the near future the development of 8,000 acres of that project that would be ultimately cultivated. There are something like 2,000 acres of it now, under cultivation, if my memory serves me right. I am not speaking of the old irrigated lands in that area, but the new lands brought under cultivation by virtues of the irrigation (1137) district they organized.

I don't have accurate figures on the number of acres of the older lands already under irrigation. My estimate would be in the
630 neighborhood of 2,500 acres additional.

I know where the Jordan Valley products at the present time are marketed. Livestock is driven out towards Murphy, and also delivered at Homedale, and some probably was formerly delivered at Caldwell, but the principal markets there now are Homedale and Murphy, Idaho. It is very probable the construction of the cross-State line would change that condition on shipments taking place during the spring and fall months. It is rather a dry country and arid country between the Owyhee River and Venator, not a practical drive for livestock during summer months, but in fall it is entirely practicable to drive the livestock across the country, and it is entirely possible that a considerable amount of that livestock would be shipped westward, coming into Harney County for shipment over this railroad. (1138.) Jordan Valley being distant as it is from market, they have got to concentrate their products in some form that they can haul conveniently or chiefly by truck or walk it out on foot, and my judgment is that that project is going to grow into a dairy product, in concentrated form, and into livestock and

feeder stuff to be walked out. There will be no grain grown in that project except for local consumption.

I am quite familiar with conditions around Brogan and on that project. I will state how I obtained my information. I was practicing law in Vale and Ontario both from 1909 to 1918. During that time I was engaged in practically all of the litigation that took place on Willow Creek, both in the adjudication of the water rights and in the troubles that followed on the Willow Creek project. The
631 fact that there was some discussion this morning by witnesses as to the troubles that existed on that project does not decrease the water supply on the stream in the least. The fact of the matter is that the Brogan or Willow Creek, Oregon, project never was feasible and never was justified from the standpoint of the cost involved. It was undertaken originally without any investigation, and a very large sum of money was spent to store a very limited amount of water. Now, following that investment, they applied the water to the land and attempted to irrigate more land than they had water for. This resulted in litigation. There actually is approximately 4,000 acres of very high quality of land that that reservoir will irrigate safely here and that there will be an ample amount of water for, and that land lies up in the vicinity of Brogan. Now, the company that undertook the development of this project went 7 miles below Brogan and acquired a large acreage of land in the vicinity of Jamieson, and they attempted to develop that land to alfalfa and to some large orchards. As a result of litigation they were denied the use of the water which formerly had been divided up between the Brogan area and the Jamieson area, and, being denied the use of the water, they couldn't maintain their orchards, and they had to let them go. However, this water is being used on an equivalent area of land in the vicinity of Brogan, and it is certainly one of the garden spots of the Northwest—limited in area, but a very fertile and a very productive area.

I have prepared a table giving estimates I have made of the probable production of staple crops on the Harney Valley project and the Blitzen Valley project and the Silver Creek project. (1140.)

The comments I just made relate to the Willow Creek project in the Malheur country, in the vicinity of Brogan and Jamieson.
632 There was some discussion this morning by witnesses as to why an orchard was abandoned down there, and I merely wanted to explain that situation.

I prepared the tabulation you passed around. It represents the possible production of staple crops on those projects.

(Said statement was thereupon received in evidence, marked "Complainant's Exhibit 22, Witness Duncan.")

Now, in the preparation of this table I went through the reclamation reports of the U. S. Reclamation Service, and from my knowledge of various reclamation districts that I have visited in the past, and some knowledge of what they were (1141) doing, I took the reports of the Minidoka project in Idaho, which lays at the same ele-

vation as our project in Harney County, 4,200 feet, and conditions are very similar, and also the crop reports from the Klamath reclamation project in Klamath County, and then compared the reports on these projects, the crop reports on these projects, with the results that had been obtained in our county by the experimental station, as well as by actual knowledge of the crop yields in our county.

Now, the first item which I have carried through with these three tables is sugar beets. Now, in order to explain why I included that, permit me to say that the Bureau of Agriculture has during the past year put into the field in Harney County an entomologist to study the question of sugar-beet production in Harney County. It seems from all reports and from the Bureau of Agriculture that the sugar-beet industry in southern Idaho and Utah is failing because they are afflicted with a pest called a white fly. It blights the beet and it keeps their yield down very materially. Now, the investigation is being made by the department and has been conducted now for a period of four or five months to determine whether or not the
633 Harney Valley area will be free from that condition, and Mr. Wallace, who is in charge of that work in Harney County, is in the field every day, has visited every area of the county, and visits (1142) every area of the county at frequent intervals to watch the development of the white fly. Now, the white fly is not dependent upon the beet crop. He is a native of the country, and as I understand it, its development is dependent upon weeds and other vegetables growing in the country for production. He merely feeds on the sugar beet, and this fly has not been found in Harney County except in very few instances, and Mr. Wallace reported to me a very few days ago that it was his judgment, after having studied the situation for several months, that Harney County was going to prove an ideal sugar-beet area. Now, in connection with this, companies that I have been with have conducted quite extensive experiments as to the production of sugar beets—this is on plots, not under field conditions—on these plots, and we have found that our soil, our climatic conditions, and our water are ideal for the production of sugar beets, and it is only, of course, a presumption, but we believe it logical that in time—and I don't care to state how soon it will be—but in time we are going to have an important development of the sugar beet industry in Harney County. Every element that makes for its favorable development is to be found there, and we are working hard to bring that about.

Now, one of the problems that we first encountered in working out the sugar-beet industry was the question of heat, coal (1143), or fuel for the reduction process that is necessary, and I am trying to say that sugar-beet experts, engineers, and agricultural
634 experts who came into the territory to investigate it from that standpoint, had reported against it, because of the fuel cost, but we feel that we have absolutely overcome the question of the fuel cost, because in conjunction with the sawmill industry which will

be developed in Harney County—and I will mention that later—we are going to have a vast quantity of surplus fuel from those sawmills, which is now simply burned to get rid of it, that will be available as fuel for sugar refineries. Their run is only a few weeks in the year, whereas the surplus sawdust product, which is a very high-grade fuel, can be had at a very small cost by storage on yards provided for it.

Now, I don't care to be understood in this table to say that it is my judgment that this will be the absolute acreage that will be produced in these various crops. I say that this is a possible production of the present irrigated lands in the county, and this table does not take into consideration the fact that the Harney Valley irrigation project can be developed from 61,000 acres to over a hundred thousand acres, and the Blitzen Valley project can be developed far in excess of 34,000 acres. We have other projects that can be developed far beyond these figures, and I feel that in using merely our present irrigated area on the Blitzen and Harney Valley (1144) projects and the 16,000 acres on Silver Creek that we are using a very conservative area for the basis of computation.

This statement of mine does not contemplate, so far as sugar beets are concerned, any rail haul of the sugar beets; only locally from the point of origin to its common point in the valley itself.

Q. I know; but did it contemplate, so far as sugar beet is concerned, the construction and operation of factories for the
635 manufacture of beet sugar in Harney County?

A. That is what it contemplates entirely, the development locally.

Q. Well, then you estimate the production of sugar beets would contemplate some rail movement of the product, would it not? (1145.)

A. Entirely so. Now, in this table, Mr. McCulloch, I do not attempt to say that this tonnage which I have estimated is all rail tonnage. I don't believe that could be the case. I think that the wheat, the barley and the oats and the alfalfa very largely, very much of it, will be consumed in our own country. I am not competent, as a matter of fact, to reduce this crop that I have estimated that we can produce to tons of meat, or to carloads of sugar, or matters of that kind, but I do believe that evidence and the commission are perfectly competent to reduce that and from that ascertain that there will be a substantial movement of these products from our county, either in its present form or in its finished form.

The product of beet-sugar factories would be first, sugar. And then the refuse is a very valuable product, by-product from sugar factory, which would be a very valuable food product for livestock in that valley.

Q. Now, what have you to say with respect to the other commodities, or have you said everything you wanted to about the other commodities that you have shown on this statement?

A. I think that the table speaks for itself. (1146.) Now, I want to say, in explanation of that, that I have tried to be and have been extremely conservative in the quantities that I have estimated would be the yield per acre.

636 I can state what period of time, by what date, we anticipate this production that I have estimated will be realized. Basing my estimate upon the fact that in 1925 the railroad started in operation into Burns—it was completed a little earlier than that, but they put a schedule on into Burns, and immediately our farmers began the development of a wheat crop, until last year the wheat shipped from Burns alone was approximately 1,000,000 pounds. Now, then, in two years it gained from nothing to that point by reason of the construction of a line into Burns, and I believe it reasonable to say that if the cross-State line is built that immediately, anticipating the completion of a road, that the minute the road is under construction and there is an assurance that it will go ahead, that our irrigation projects will take a new lease of life, agriculture will develop, will begin immediately, and this crop will begin to move by the time the railroad is completed.

It is my judgment that when these projects produce this amount of tonnage as estimated by me that all (1147) of the tonnage so produced, with the exception of sugar beets that I have mentioned, will be hauled out to some market by rail, either in the form in which I have mentioned it or in beef, which will be our primary production. Now, I think there is a generally accepted standard that a ton of alfalfa will produce 60 pounds of beef. That being the case, it is merely a matter of computation as to how many pounds of beef our alfalfa production will bring about. The same thing is true of the wheat and barley and oats. All that, if not shipped—and there probably won't be much except the wheat shipped in its original form, coming from the field—will be reduced to the finished product of beef, and in that connection I want to say.

637 that I will be followed by another witness—that I don't believe from my observation and knowledge of that country that there is a better or more productive country in the West for finishing beef, fattening it and putting it onto the market in the very best possible condition as prime fat beef, than Harney County if we had rail facilities for getting it to market. We don't have that to-day, and with the construction of the cross-State line to the West these products that can be fed to beef will be fed to beef on our feed lots during the winter months primarily and will be shipped to market in a finished fat form, instead of going into the distant market as feeders. (1148.)

I would say that a very considerable portion of the tonnage I have estimated on this exhibit would be available within the five-year period for this cross-State road. I would say that within the time that this road can be constructed 15 or 20 per cent of this production will be available.

I went over Mr. Teutsch's exhibit for Harney County. I think he is altogether too conservative on his areas, and on the amount that he has estimated as being available from that county, altogether too conservative. As a matter of fact, I think my figures with the exception of sugar-beet production there, 10 tons an acre, is a little more than 50 per cent of the possible acreage, and I base that statment upon actual knowledge of extensive production in the irrigated section of the county.

Irrespective of differences between my estimates and Mr. Teutsch's estimates, this statement represents my best judgment, based on my experience and observation and study of conditions in Harney (1149) County.

There is almost 6 million acres of grazing land in Harney County.

That grazing land in the county will indefinitely support
638 a very large livestock industry. For all time I look to see the livestock industry the predominating industry of Harney County. Agricultural production in Harney County is going to be entirely subordinate to the production of livestock. I mean by that that the irrigated areas of the county are going to be farmed and irrigated and controlled for the purpose of production of beef. We are not going to be primarily a wheat production center, or anything of that kind. We are going to produce beef.

Q. Mr. Duncan, before I forget it, I wanted to ask you one question about this Brogan project irrigated from the waters of Willow Creek, and this Jamieson development. Was that a project undertaken by the State of Oregon, or (1150) by the Federal Government?

A. Neither one. It is entirely by private enterprise, by some Chicago interests. The Barlow Trust Company of Chicago were the first organization back of that project.

Q. All right. Now, I would like to have you state, in addition to the major irrigation and reclamation projects that you have discussed, what additional irrigated lands in Harney County there are that are capable of being irrigated or are being irrigated now, the amount of acreage in those various tracts, and their approximate distance from the route of the proposed cross-State line?

A. Well, entirely in addition to the lands that I have mentioned in these irrigation projects there is a total of, in round numbers, 40,000 acres of irrigated land in the county that is producing hay, a small amount of grain, and possibly a small amount of irrigated pasture—by that I mean high class land as being irrigated and the grasses instead of being cut to hay are pastured off each year.

(1151.)

639 PORTLAND, OREGON, *Aug. 9, 1928.*

Now taking up dry farming in Harney County: Out of a total of 6,000,000 acres of lands in Harney County in excess of the irrigated area that I have mentioned, there is at least 500,000 acres of that area that is so situated and of such nature that there has been more or less dry farming on it. By dry farming I mean a

cultivation and tillage of the soil without artificial irrigation for the purpose of producing crops, such as the hardier grains, particularly rye. Now, it is true that this has not generally been a success in our county, and has been abandoned very largely. That fact is due to several factors. The population of the county has decreased, due to several conditions, principally due to the fact, I believe, that there has been a lack of transportation across the State giving us an easy outlet to market, and making the production of any of our crops that will be marketed in that manner excessive—that is, the cost will be excessive, and has discouraged the (1152) development of any of that class of land. Now, whether it would be largely profitable to farm that land I am unable to say, but I do say without hesitation that there would be annually a very large production of that class of crops from our dry farm lands if we had a through transportation system that would bring into our country people who are now discouraged from coming into the country, because we are at the end of a long branch line and are so very much isolated from the rest of the State.

On considerable areas there has been successful crops of wheat and barley grown on the strictly dry land. I have in mind one valley that we call the Virginia Valley, about 15,000 acres in extent. Practically all of it at the present time is cleared and has been
640 in cultivation—not every year, but it has all been in cultivation to wheat and is now producing large crops of wheat for dry land, the yield running up as high as 25 bushels to the acre in favorable seasons, and from that down to about 10 bushels to an acre in seasons which are below average, but it does grow very successfully.

In my judgment, the dry farming of lands in Harney (1153) County would be stimulated by the construction of the cross-State line, several hundred per cent, I should say, and such increase in cultivation would begin immediately after we got assurance of the construction of a cross-State road. I think the total aggregate production under dry farming in Harney County would be very large with the cross-State line built. I am unable to give figures along that line as to what it would be, but it would be very large.

Now taking up livestock in Harney County: In my comment on the livestock industry yesterday and the utilization of the crops which I believe our present irrigated areas will produce, I referred to cattle quite often in my testimony, and also used the term "meat." I didn't mean to leave the impression that our total product would be cattle. Sheep is one of our leading industries, and we would produce a very large amount of finished mutton that would be fed on our feed lots and shipped largely—or would be shipped in much larger quantities to western markets. The western markets are increasing very rapidly, particularly as to the proportion of mutton that is being used in our western markets (1154), and with a cross-State road our lambs which are now going out as feeders, will in large numbers be finished on our feed lots and be shipped to our

western markets, particularly to the San Francisco area, the Bay cities.

641 Now, I think it very significant to point to the fact that the livestock industry in Harney County has been on the decrease, rather than on the increase, for a number of years. That has been brought out in the testimony of other witnesses, and it is my judgment as well as the judgment of all of the stockmen in our county, that our present cattle population is 50 per cent below what it has been in the past, and many of our more prominent stockmen who are well informed insist that we don't have more than 25 per cent of the stock that we formerly carried. Our ranges will carry 100 per cent more cattle than we are carrying at the present time without depleting the range and without decreasing the carrying capacity of the range for sheep. There are now approximately 50,000 head of cattle in the county, and that can be readily increased to 100,000 head, and is being increased very rapidly under present conditions.

The decrease in the cattle production is due largely to the deflation period following the war, when cattle were forced into the market by those holding loans against cattle (1155) in particular. Conditions are much more suitable at the prasent time, prices are more satisfactory, cattle are being produced at a profit, and people are rapidly again building up their herds.

I expect to see the livestock industry in Harney County get back to what it formerly was. Even under present conditions it will get back to what it was in former years. It may take two or three and maybe four years to grow into that state, and I do say that with the construction of the cross-State line it will so simulate it that the reproduction of our herds will be supplemented with shipment of stock cattle into the area. In fact, that condition is now being brought about to some extent and it will go forward very

642 rapidly. I would say this, that it is the estimate of all of our stockmen, and it is my judgment, that with the construction of this cross-State line, giving us an entry into the Bay cities cattle markets, also into Portland, that it will actually increase the value of every head of cattle in our country—I mean by cattle, the cow of the breeding herd—not less than $10.00 a head. Estimates are placed much higher than that by some of our men in that country who are very well informed, and that would be a very conservative estimate. (1156.)

The development of Harney County began comparatively recently; about 1872 we began the development of our country, when the cattlemen of California and southern Oregon came in there for the purpose of pasturing their herds and developing the country, and from 1872 and up to the present time development has been gradual to the point that I have mentioned. Up to 1916 the closest railroad point that we had was Ontario, Oregon, 145 miles distance by average drive, from our county, and the fact that during the development of our country we were isolated compelled the settlers to develop

the livestock industry so that they could market their products on hoof.

At the present time if we want to ship cattle or sheep or horses from Harney County by rail to Portland or ports north of Portland they must be shipped by rail either from Burns or Crane or Benator, and then travel generally eastward to Ontario, where they reach the main line of the Oregon Short Line, then they skirt the east and north borders of the State of Oregon, reaching Portland, for diversision to Seattle generally. Of course, Seattle could be reached by another route, but that is the route that is travelled by our livestock. (1157.) They must travel east from Burns, a distance
643 of 160 miles before they begin to go north and west.

Q. Now, if you want to ship Harney County cattle, or sheep or horses to San Francisco, or California markets, what route must they take out of the county?

A. For years, the few that have gone into that market—and it is a very limited number that has been shipped by rail—they would go either by way of Portland, then to San Francisco, or by way of Ogden. The distances are almost equal. I would say, however, that comparatively few—and I have in mind no shipments of that nature, except shipments that have gone into Portland and been confined by the grower to Portland, and then bought by the California buyer and re-shipped to San Francisco—probably a good many of our cattle have reached the California points that way, but I have no record of it; but the practice of our stockmen has been to drive their stock overland to Winnemucca, Nevada, a distance of 250 miles, and there ship to San Francisco, and this has been the movement of a very considerable portion of our livestock from Harney County. The long shipment by way of Ogden and Portland makes it entirely impracticable for the stockmen successfully to ship (1158) cattle to the San Francisco market.

Q. Now, would the construction of the cross-State line provide a shorter and quicker route to Portland and all points north than you have by existing routes out of Harney County?

A. It would very materially shorten that distance, and by virtue of that fact our livestock leaving Harney County would reach the market particularly of Portland in a very much better condition than they now do going around by the present route, and it is
644 that fact, that we would get a less shrink and cattle would reach Portland in better condition than they can now under existing conditions, that will tend materially to increase the value and the quality of the animal delivered. The saving in distance to Portland would be in excess of 150 miles over our present line. That proposed cross-State route would also to a much greater degree save distance and time in getting cattle, sheep, and horses to the California markets. Another advantage that the cross-State line would bring to our livestock men is that the California buyer would be able to come to our territory and purchase this stock for direct shipment to San Francisco (1159) and bay points, or would

meet our livestock shipments at the junction in the vicinity of Crescent, and we could divert our shipments then to California markets as conditions might warrant. Of course, market conditions control those factors, but that is the thing that would do more to stabilize our market than any other one thing that could possibly be done.

I have figures with me as to the carload shipments from Crane in 1923 of cattle, sheep, wool, hogs, horses, and meat.

In 1923 the cattle shipments were 234 cars; sheep, 168 cars; wool, 24 cars; hogs, 11 cars; horses and mules, 8 cars. In that year a very large number of cattle were driven from the Harney and Blitzen Valleys to Nevada points for shipment to California. That year was about an average year for the number of stock delivered to California by way of Winnemucca. If anything, it might have been slightly in excess of the average drive, but there was 15,000 head that year driven (1160) overland to Winnemucca, Nevada. Now, I say average year—I mean up to that year. I believe, however, that since 1923 the deliveries to Winnemucca have been less.
645 That is due to the fact that some of our largest producers of cattle in that country have gone out of business and are entirely out of the cattle raising industry. (1161.)

During the same year there was approximately 2,000 head of cattle driven from Harney County into the Klamath Falls area. Cattle are still delivered that way.

Since 1923 and the years subsequent, there has been substantial shipments of cattle, sheep, wool, hogs, and horses by rail from Crane; larger numbers than there were in 1923, in my judgment. I don't have the figures as to the actual number shipped during succeeding years. If in the year 1923 the proposed cross-State line had been built and in operation, in my judgment by far the largest proportion, practically all of the cattle, would have moved westward. There would have been some movement of cattle, however, eastward to Ogden and to southern Idaho feeding points, depending entirely upon market conditions, and I don't have them in mind just now. Probably 25 per cent would have gone that way. But with the increased facilities for reaching western markets, and California markets in particular, the tendency for eastward shipments would decrease.

As to the cattle that were driven to Winnemucca and to Klamath Falls from Harney County in 1923, in (1162) my judgment not one of them would have been driven to those points if there had been the cross-State line built and in operation in that year. I am very certain of that in my own mind, that not one of them would have been driven overland, if we had had a rail connection as proposed. I believe all of that 17,000 head of cattle would have been moved by rail over the cross-State line west. That would have made
646 about 575 carloads. Now as to sheep the condition is somewhat different. Our markets are not all westward for sheep, but the sheep market and the consumption of sheep on the Pacific coast

is increasing at least in proportion with our increase in population, which has been 32 per cent in California in the last six years, and the northern California market is now taking really about 350,000 head of lambs, and of our sheep it would be a very conservative estimate to say that 25 per cent would move to western markets, San Francisco, Portland, and Seattle particularly, and principally to the bay cities.

The Pacific Livestock Company has extensive interests in Harney County. They own about 120,000 acres of land (1163) in the county still.

Q. Is that company, if you know, interested in the construction and operation of this proposed State line?

A. Mr. McCulloch, conditions in connection with the Pacific Livestock Company have changed very materially since the former hearing in 1923. They have been forced into liquidation, and the management of the company has changed hands. In 1923 and '24, when we were holding the former case, they then owned and operated the largest killing plant slaughter house, in the bay region. They have since disposed of that and they are now actively disposing of all of their properties. They are intensely interested in the construction of this cross-State line. Their properties are being divided and subdivided and sold, and they are passing into the hands of the smaller livestock raiser. Their plants, particularly the cattle plants, or livestock plants, some of them, are admirably suitable for sheep raising, and they are moving into the hands of smaller owners at the present time.

I have made estimates of the saving in time in reaching
647 Portland and San Francisco markets that could be effected by the use of the proposed cross-State line when built, in the transportation of livestock from Harney County. The general impression among livestock men, and my own judgment is, that it would cut our running time in half (1164), particularly to the Portland market; and the same thing is true of the San Francisco market. That would mean a day is consumed in reaching the market, not exactly in running time alone.

Q. Have you made any estimate translated into terms of dollars per head, of the saving in freight, shrink, and shipping expense that would accrue to the livestock producer if he had the opportunity of using this cross-State line?

A. Under present market conditions the saving would be not less than $10 a head, and unquestionably on steers in particular of the heavier type, ranging from 1,200 to 1,300 pounds, the saving would be in excess of that.

As to the timber development in Harney County: It is very essential that the commission should understand that condition in this county. I do not have the accurate figures, but I have a very thorough general knowledge of that situation. Directly tributary to Harney Basin there is approximately 9,000,000,000 feet of the western yellow pine lying in the Malheur and the Ochoco Forest Reserves.

There has been sold and is under development now a project to mill a tract in Bear Valley and surrounding Bear Valley of 890,000,000 feet of pine timber. The other varieties of timber, fir, larch, hemlock, increase that amount materially. However, these (1165) are minor species for which the market conditions are uncertain, and we don't use the estimates of that tonnage or that stumpage in going into the question of values or development.

648 This area has been sold by the Government. There is now constructed from Burns, Oregon, northward to manufacture that timber, or bring out those logs, a railroad 50 miles in length to Seneca, that is a common carrier built as a feeder for the Oregon Short Line where it connects at Burns, Oregon. That is the Malheur Valley Railroad, but it is generally referred to as the Fred Herrick road, and it is a very high grade construction and a first-class road—better than what would be referred to as a logging line, by far.

As to the policy of the Forest Service in cutting this 890,000,000 feet of timber: The forest reserve has adopted the policy of the perpetual cut of timber in each given area where such a policy is at all practical of operation, and in this area they first put on the market this one unit of approximately a billion feet of timber and reserved four other units of similar size around it for successive cuts. Their operation is based upon a 20-year period in this particular area. They estimate that under the plan and contract which they have entered into, this unit of 890,000,000 feet of pine will be cut off in a 20-year period. (1166.) Succeeding that period they will cut off another unit of similar size, in the succeeding 20 years, and so on until they have cut over the four units, which I know was the policy they adopted at the time the original sale of this timber was made. By that time, when they have cut the fourth circle, they will then resume cutting on the unit which they are now working on, leaving at this cutting the immature and young timber, which at that time would be ripe and ready for development. And in that manner they have a successive cut and perpetual cut.

649 Now that would take from the Harney County area approximately four million feet of timber reserved for this one operation, but with the nine billon feet which is in that area and tributary to Harney County it would permit them to put in another unit of this size and still have a very large amount of timber for the smaller operators in areas where it is not practical to reserve it under the perpetual production theory of the Government, and that is their policy at the present time.

This 890,000,000 tract of timber will be milled at or near Burns, Oregon; and that is the contract that the purchases entered into with the Government.

Q. Is there a sawmill now constructed near Burns for that purpose, on the line of railroad from Burns to Seneca? (1167.)

A. There is a mill now 50 per cent or more complete. The cut of that mill is estimated at 75,000,000 feet a year.

Q. (By Mr. McCULLOCH.) Do you know how much in thousand feet board measure of western yellow pine lumber constitutes approximately the average carload?

A. I believe it is 20,000 feet, the average. Now I am not informed on that, Mr. McCulloch, but I have heard that figure, from 20,000 to 25,000, depending upon the size of the car. So that by the use of those two factors, 75,000,000 production and 20,000 or 25,000 feet per car, the number of cars annually of lumber for shipment out of Harney County can be ascertained. I have not attempted to reduce that to carload shipments. I know it is very material, but I don't know just what it is offhand. I can compute it.

Q. The point you wish to make in this connection was that under the policy of the Federal Government in the sale and cutting of this timber an indefinite supply of timber from those forest areas is intended to be provided for all time in the future? (1168.)

650 A. It will, and it will be contributing to the Oregon Short Line as it now exists over the branch line at Ontario, and we feel that that should be taken into consideration as a supporting factor for the cross-State railroad, even though under the present conditions it has an outlet.

We expect some tonnage for the cross-State line out of the Bear Valley timber project, making that explanation in this way: The line from Ontario to Crane was brought up there with the destination, or with the intention of the builders of that line to go across the State. Circumstances compelled them to stop at Crane, Oregon. Now it is true that this timber will reach Crane, Oregon, over existing lines and that it is not necessary as far as the marketing of this timber is concerned, to complete the western unit, but we feel that this tonnage should be computed and credited to a cross-State line as a contributing factor for the support of the cross-State line, under those conditions. I do not believe that there ever was any thought in the mind of any of the railroad officials that the construction of the line to Crane, Oregon, was warranted from the standpoint of the tonnage that they would reach at that point. It is simply a dead end; it penetrated an expensive canyon from Vale to Crane, a very large investment was made, and it was not built in there even as a feeder for the Oregon Short Line, but it was built with the expectation that they would go directly across (1169) the State.

The western yellow pine in northern Harney County and that tributary to the line from Burns to Seneca, is a species of timber that naturally reproduces itself from seed. That is demonstrated thoroughly in our area. There is a very large second growth on all the areas that are protected.

651 There is quite a considerable acreage of timberland in Harney County that is in private ownership, and there is more than a prospect—there is a reasonable certainty—that there will be several small mills of fair capacity that will begin milling their timber within the near future if the market conditions will warrant,

which we believe they will, and will be contributing factors to the timber tonnage.

The lumber that is to be manufactured in the mill at Burns, in reaching eastern markets, would go over the existing Oregon Short Line branch, or the O.-W. branch, from Burns to Ontario and there connect with the Oregon Short Line from Burns to Crane. It would go by way of Crane and from Crane to Ontario and then on east. (1170.) That lumber would traverse in the State of Oregon before it left the State in going east, 160 miles, roughly, from Burns to Ontario and 14 miles to Nyssa. That would be about 174 or 175 miles in the State of Oregon.

I would say that while there are some mineral prospects in Harney County, that they cannot be used as the basis of computation for any tonnage. They are too remote from the railroad and their development and values are too low to be considered as a contributing factor to railroad development in the light of anything we know at the present time.

Q. You are not counting on the development of mineral products as furnishing tonnage for the proposed cross-State line from Harney County?

A. Not in the sense that we consider ores, gold, silver, lead, or anything of that nature; but there is a possibility in Harney County which I believe should be called to the attention of the com-
652 mission. And that is that in Harney County we have a condition somewhat similar in general description to what will appear in the (1171) record hereafter as the Alkali Lake region. I believe there will be witnesses to describe a very extensive deposit of soda ash in that area. Our county has much that same situation, in that we do not have a drainage outlet to the sea from the county and our waters are deposited at the lowest points in the various lakes, Malheur and Harney Lakes, and there through the process of evaporation the minerals have been deposited in Harney Lake region and in the Stinking Lake region. Now, I am not sufficiently expert to say that that will ever be developed from a mineral standpoint, but I would say this: That it is the common statement that Mr. Jim Hill, in a public address—I mean the railroad builder—made in Burns, Oregon, some years ago, made the statement that if Germany or any European country had the deposit of Harney Lake and what we call Stinking Lake, within its confines, it would be independent from the fertilizer standpoint from the rest of the world; that it would produce a sufficient amount of nitrates to furnish the basis of fertilizer for the entire of Europe. And that was not based merely upon casual observation but was based upon chemical analysis of the salts that are deposited in that area. Now there has been some experimentation along that line, but it has not been proven commercially successful up to the present time, but with transportation, and with the increasing need in the United States for fertilizer of that nature, it (1172) is entirely

probable that this area will be developed and will become a contributing factor to a railroad development.

Now, in this statement I don't want to be understood as
653 saying that I would claim now a single ton of freight for the cross-State railroad from that standpoint, but I do make this statement: That unless we have railroad transportation these potential resources of the State, or these actual resources of the State, will never be developed.

Q. Mr. Duncan, do the county courts of these three counties for which you speak, and do the people of these three counties, consider the construction of this cross-State line as a convenience or as an actual necessity to their proper development?

A. I desire to divide that area into two districts. I would say that as far as Harney County is concerned and the southern portion of Grant County, that they are 100 per cent of the opinion that the railroad is an absolute essential element—the cross-State railroad—in the development of our country, and it is not possible, under any circumstances, to develop our county without the construction of such a line.

Now, as to Malheur County, where they are developing the two extensive irrigation projects that have been referred to as the Owyhee and the Vale projects, while probably the necessity is not as imperative as it is with Harney County, still (1173) the people of that area feel that with the increased production that will come from these two projects and from that valley, that they will not have an equal chance with the producers in other more favorably situated irrigation projects unless the cross-State line is built so that they can get into the northern California markets. It must be borne in mind in that connection that the northern California markets are increasing very, very rapidly, and while it is true that the other western markets are also increasing, still the consumption power of northern
California is far in excess of the other northwestern
654 area and their home production is less. In other words, they are importing more of their foodstuffs than the other States.

The development of hard-surfaced highways, such as are contemplated in the Yellowstone cut-off and in other directions, through the interior part of the State of Oregon, would not make possible the development of the territory in that part of the State, for the products which Harney County in particular produces, nor would it materially assist in Malheur County. The distances are too great to practically haul the produce that we have to market by truck over even the best of highways, and we have no first-class highways even contemplated into our country. Our products are basically the heavy tonnage products, meat and wheat, and it (1174) is not practical to haul such products the distance that they would have to travel by truck. I would say that it would be a factor in the development of our country, in that it would facilitate the travel of persons, bring people through our country, and it would help in that

way, but as far as the actual development of the agricultural and livestock resources it would be a very, very minor factor. (1175).

Cross-examination:

Q. (By Mr. SPENCER) As I gather from your testimony, the present line from Ontario into Burns hasn't been of much assistance to your country there nor made much use of, is that right?

A. No, Mr. Spencer; I don't want to be understood in making the statement as broad as that. It has been of great assistance to us, but I would cite the statement that I made before, that prior
655 to the construction of your line from Crane to Burns, which was not made by the Union Pacific, however, we produced no wheat up there. Now we are shipping wheat. We have been producing a few acres of wheat there for years for home consumption, not for export, not for shipment.

Q. Well, you haven't produced any to speak of for export yet, have you?

A. Well, I think we have made a very, very substantial showing for the time that we have.

We can't produce wheat and ship it from Crane.

Q. Well, you have got a good highway, and have had for years! The best highway you have got is from Burns west to Crane and Ontario, isn't it? (1176.)

A. No; not from Crane to Ontario there is no highway. There is a good highway from Crane to Burns. It is 30 miles and has been there since 1922.

Q. Well, now, why couldn't you deliver wheat, if you raised it, at Crane before this extension was built up to Burns?

A. The trucking cost was too great. It can't be done successfully.

Q. Well, do you mean to say that if you can produce 50 or 60 bushels of wheat to the acre that you can't raise it profitably and truck it 30 miles and ship it to markets that pay over $1.00 a bushel?

A. They don't pay over $1.00 a bushel in our area, Mr. Spencer, and I would say this, that as far as the wheat that has been shipped from Burns, it hasn't proven highly satisfactory from a financial standpoint. It has been possible, but it isn't a very profitable proposition under those conditions.

There are flour mills, several of them, all along through
656 southern Idaho. There is one at Ogden. (1177.)

Q. And those are the destinations, except one or two cars where your wheat has gone?

A. No, I think not. I think most of our wheat has gone to Portland. Portland buyers have been in there. Now, I have no actual knowledge of where this wheat went to, but I know it has been bought through cooperation between the local warehouseman and the buyers at Portland.

We have a local warehouse at Burns—not a wheat warehouse—a general warehouse, and that warehouse handled all the wheat that went through Burns.

These southern Idaho mills and the Ogden mill get some of their wheat from southern Idaho, and I think they ship probably some wheat from the Dakotas and probably some from the Pendleton areas. I believe they ship wheat in from the Dakotas to those southern Idaho mills in limited quantities, for the purpose of blending their wheat; but the wheat that we grow from the irrigated areas of our section isn't particularly suited for milling purposes, unless it is blended with a hard wheat from some of the hard wheat producing areas. Now, where they get (1178) their hard wheat I don't know, but I do know that it is the policy of millers to blend their wheat in that manner.

There might be hard wheat grown in Idaho in limited areas, but not in irrigated areas. As to whether it is grown in large areas around American Falls and east of Minidoka, I am unable to answer. I don't know how much hard wheat is grown.

My opinion that wheat was sent from the Dakotas down to blend with southern Idaho wheat was merely from my knowledge of
657 the fact that it is necessary for the miller to make a high grade of flour that he have a hard wheat. Now, where he is going to get the closest supply of hard wheat I don't know, but my notion would be, from my general knowledge of the country, that he would probably go to the Dakotas. Now, I may be in error in that. I am not contending that I have any definite information.

I do not think it is necessary for the Portland and Astoria mills to go into the Dakotas to get wheat. They have the eastern Oregon and the eastern Washington, the Inland Empire, to draw from. (1179.)

Southern Idaho has a line by the Oregon Short Line up to Butte. Montana wheat is hard wheat. They probably get wheat from there.

Q. Now, over the years some of your livestock men in your territory in Harney Valley have been conspicuously successful, have they not?

A. Well, not in 10 years, but over a period of 30 years there have been some very large livestock industries built up in Harney County, but I would want to say that in the last 10 years those same industries have not been successful, and one of the largest of those plants is now out of the cattle producing business entirely; it hasn't a hoof. That is the Eastern Oregon Livestock Company, the former Blitzen Valley ranch.

Q. That is Swift?

A. Over 90,000 acres. Yes, sir. I represent that institution. (1180.) I have been associated with it for the last nine years. His operations were not just as favorable as Mr. Hanley's. The land is just as good, or compares very favorably—I won't say just
658 as good. I think Mr. Hanley's Bell-A ranch is the very cream of that entire country. His Double-O ranch represents a little different problem; it isn't quite the cream of the country, but it is a substantially different proposition.

Q. I thought you pointed to the Blitzen here as one of the finest layouts for an irrigation project that there was there.

A. I do.

Q. Now, Swift, in the operation of that, hasn't been successful over a period of 20 years. They have been in there pretty near 20 years, haven't they?

A. No, sir; they haven't; not quite that long. They did not buy with Corbett in there. (1181.) Mr. Corbett was in that operation long before the Swifts were. He was in that operation with Mr. Hanley prior to the time that the Swifts bought into the plant. The Swifts have been in there I think 13 years now, accurately, maybe 14. I have been there ever since the line was extended from Juntura to Crane. That was opened for operation into Crane in 1916. Swift has closed out, sold all his livestock. They sustained very heavy losses in their operation. During the same time, in the same country, Mr. Hanley has operated successfully. He has extensive holdings and large herds right now.

Q. Now, after all, management has a whole lot to do with success or failure in these enterprises, doesn't it? (1182.)

A. I think there is as much distinction between that operation as there would be between the operation of two factories turning out the same products; one might be of such a nature that it
659 couldn't profitably turn out a product, and the other turn out a product at a profit. Now, that is the condition that we have there, while they are in the same general country, they represent so many different elements that it is impossible to make a comparison from the standpoint which you attempt to draw. The fundamental, basic elements are practically the same if you limit that to purely fundamentals. They are substantially the same soil in the valleys, substantially the same elevation, substantially the same water, substantially the same white-faced cattle, and substantially the same feed.

Q. Now, what particular element was it that resulted in the failure of Swift and in the success of Hanley?

A. Well, Mr. Spencer, that would be a very long story, and I can probably give you just merely an insight (1183) into it, that's all. Mr. Hanley changed his method of operation and kept all his livestock in his own fields, within his own fence, produced his own hay, and kept his livestock down to that that he could handle under his own fences. The other plant during those years had a number of cattle that they couldn't maintain within their fences, and they were compelled to turn them out on the range. Now, those two factors alone are sufficient to the livestock man to explain a very wide difference. There is a difference in the crop, a difference in the quality of the meat that comes out, makes a difference in the market conditions. In other words, they didn't reduce the size of their operation at the time the deflation came and take care of the loss.

Q. In other words, Swift, when the inflation came, kept building up, and figured that the sky was the limit, and got caught in the

crash, and Hanley cleaned up and trimmed down his herd; isn't that right?

660 A. Well, that isn't far from a correct statement; yes. Now, the fact that there wasn't a cross-State line there didn't affect Swift's operations at all? He would have crashed just the same, as far as that operation is concerned, wouldn't he? (1184.)

We don't want it to happen again with the man that takes over these properties. We want to stabilize that proposition so it won't come about that way.

As to where these shipments of livestock from that country find destination markets, the sheep go east; the cattle go both west and east, the larger number going west. Considerable quantities of cattle go east, as feeder cattle; not as beef. The eastern markets require a better finished product in cattle for slaughter than do the western markets. They feed all that goes from our country. Nothing goes to the block from our country. They trim them up with corn.

Q. But the more profitable sales, in many instances, and over a considerable period, of your cattle production have been in (1185) the east, either in the Omaha, Kansas City, or Chicago markets, isn't that true?

A. I don't believe that to be true, Mr. Spencer. I would say some of our largest sales are made in that direction, but I wouldn't say the most profitable sales are made that way, because I believe that the most profitable sales are made in the Portland market to-day.

Q. Now, the large shippers out of that valley in the past years have been Swift's shipments and Mr. Hanley's, haven't they?

A. And the Pacific Livestock. The Pacific Livestock is a San Francisco institution and sends its stuff down there.

Q. And Mr. Swift and Mr. Hanley have shipped out largely to the east, haven't they?

661 A. No, sir; the Eastern Oregon Company which you refer to as the Swift Company has never shipped their own stuff. They sell it in Harney County to the highest bidder at the best price obtainable, and let the purchaser ship out where he pleases, and, as a matter of fact, when they were in production practically all of their stuff was sold to the Pacific Livestock Company and driven to Winnemucca, Nevada. From Harney Valley to Winnemucca, Nevada, is about 250 miles. (1186.)

Q. And they drive even farther than that, from up in Grant County, don't they?

A. Well, the Pacific Livestock Company begin their drives from the Blue Mountains, yes; 50 to 75 miles north of Burns, and drive right through to Winnemucca, or did. They have done that for many years. They did it even before the railroad reached Crane. Others have done it. The Eastern Oregon Livestock Company, in particular, in large numbers. (1187.)

Q. I thought you said they sold right there.

A. They do, but they sell for delivery at Winnemucca. They sell to the Miller & Lux, the Pacific Livestock, and did deliver their stuff themselves at their own expense at Winnemucca.

Q. Yes; at the same time that the Pacific Livestock were delivering some of theirs?

A. No; they would make separate drives out of them. They were going to the Pacific Livestock as a San Francisco operator.

Q. Now, is the stock arrived at San Francisco, after an operation of that kind, suitable for slaughter?

A. It doesn't, and that is the thing we are complaining about. It is impossible to get them there in condition for slaughter—it has to be fed there—whereas we have got the things in Harney
662 County that we can produce right now that will finish that stuff up, and with the cross-State line we can deliver it in San Francisco ready for slaughter, or Portland. We can't deliver it in Portland now in prime condition.

There was a difference, I said, of 150 miles in favor of the cross-State line from Harney County (1188); I would say from Crane. Now, Mr. Spencer, in making that estimate I don't have before me the figures as to mileage over your present route in connection with your Natron cut-off. It might vary just a few miles from the 150 that I mentioned, but it still puts us within a one-day run from Portland. We can't have that now.

Q. Well, would a mixed train operation across the cross-State line take you into Portland any quicker than the operation now from Crane to Portland via the Oregon-Washington Railroad & Navigation Company?

A. I imagine that delivery of livestock across that line would be slowed up so that there would be no advantage, but we don't ask for that and don't anticipate it.

Q. I don't say that it could be slowed up. I am asking you, would a mixed train operation, if the business was such as would justify no more service than a mixed train, would you reach Portland any quicker than you would now?

A. Well, it depends entirely on your service, Mr. Spencer. (1189.) When I say that I don't know what character of service you can afford to give us, but we will be in a distance where you can give us service and put us there in Portland in a one-day run. If you contemplate the same service that we get from Burns to Ontario across the desert that you refer to into a junction, we wouldn't save much in time, no, in reaching Portland.

Q. Now, suppose you ship 500 or 600 cars of cattle a year,
663 which is three or four times what you ship now, or three times, you know that a livestock special couldn't be operated across the State to justify that kind of an operation, could it?

A. Not and run it the year around, that is true, not from the products of Harney County. North Portland is the market now.

It has been the market for years of this Northwest, the buyers come in there from San Francisco and from Seattle and all over. That market opens up on Monday morning. The livestock special has to be in there the night (1190) before, the day before, so that the stuff may be exhibited and sold to advantage. That schedule is very important to the shipper, and is maintained with great consistency.

Q. Now, don't you, upon reflection, are you persuaded, that such service could not be maintained in an orderly, regular way, at fixed periods, across the cross-State line from the Harney Valley?

A. Mr. Spencer, if you will take present conditions I will say you are entirely right, but I can't possibly conceive that that condition is going to continue. Portland isn't always going to be the only market for that territory. The growers are going to assist themselves in developing a competitive market with San Francisco, and I am fully convinced that with the construction of this cross-State line that the movement of stock to a common point on the Natron cut-off is going to be in sufficient capacity to justify an expedited service, so that when they get to that point, even though the distance may be a little bit longer from southern Idaho points, still the additional cost will more than warrant them to reach that paint so that they can have competitive markets open to them of
664 both Portland and California. (1191.) Consistently the California market is the best market for cattle.

Q. Now, isn't it true that during the year 1927, and thus far in 1928, if the freight rate is taken into consideration, that must necessarily be applied on account of difference in distance, that the market at Portland is as strong or stronger than it is at San Francisco?

A. Oh, if you apply present freight rates on a shipment of cattle from Portland to San Francisco that may be true. I am taking and my statement applies only to the market quotations of the yard at the two points. The haul to Portland is 400 or 500 miles, and 800 or 900 miles down to San Francisco, I think. I don't have before me the cost and don't know the cost of a shipment of cattle from Portland to San Francisco. That is the reason (1192), Mr. Spencer, that we are not in the San Francisco market to-day, and that is what we are trying to reach.

Q. Now, you were speaking about this mill operation, and that the product of that mill should be credited to the proposed cross-State line. Now, you know that this line into Burns has been constructed for years, and has been a very constant loss in operation; that is generally recognized, isn't that true?

A. I would say that is true, and your line from Ontario to Crane has shown a constant and consistent loss since it has been built.

Q. Now, the line was extended from Crane to Burns in contemplation of this mill operation, wasn't it?

A. By the man that originally bought the timber, and then purchased from him by the Oregon-Washington Railroad & Navigation

Company, from him himself. I was there at the time, and I know that. (1193.)

665 I think it very safe to say, Mr. Spencer, if it hadn't been for Mr. Herrick's purchase of that timber in 1923 that your line would still be at Crane, and I say that without any disrespect to anybody in connection with your system.

The line was extended to Burns, and is now being operated by the Oregon Short Line, and it is a very fine service. We appreciate it. With that investment in there I think that that railroad should be entitled to that earning out of the mill, if it can get it.

Q. Well, then, what has the cross-State line got to do with that mill operation?

A. With the timber that will be contributed to this line, Mr. Spencer, I still question whether or not that line will show a profit. It may. I still don't think that it will show a profit, but I feel that anything, any tonnage, whether it be lumber or cattle or any other tonnage, that originates on the Ontario-Crane branch should be contributed as a factor to determine the advisability of this cross-State railway, and should be credited to that kind of an operation and not to your branch (1194) line operation that you have now.

As to the status of that mill operation, it has been sold, and the contract has been entered into by a very responsible timber man and the Government, and he agrees to begin cutting within, I believe, a period of 18 months.

As to the status of the present railroad up to Seneca and the mill that stands there half completed: The railroad is complete from Burns to Seneca; the rails are laid, and there is an operating

666 service over it. I was told by the manager of that road before I left that he had orders for 162 or 172 cars to deliver cattle and sheep out of that area, loading at Seneca, this year. I think that is probably a little in excess of his shipments last year. Those are all shipped under private contract. I think it is a common carrier. They are operating under an order from the Public Service Commission of Oregon as a common carrier, and (1195) the order is such that they are obligated to deliver at—or ship five cars or more up to, I think, January 1, of next year.

Q. All right. Now, do you know the conditions there, from a financial standpoint, of that road, or whether these purchasers are going to take it or the mill site? The whole thing is just a monument of failure, isn't it?

A. Well, Mr. Spencer, I know what you are driving at, but I am at a loss as to how to answer it. Mr. Herrick, who bought this timber from the Government in 1923, has met with difficulties. Now, I don't care to go into the question, although I believe I could answer it, as to what caused that and what brought it about. He has met financial reverse, and political reverse, and all kinds of reverses. But he did build a railroad into Bear Valley, and his line is now at Seneca, and I have gone over the line recently in your own cars, and

it is in first-class condition for a line of that type and it is operating and it is hauling freight. Now, the mill is about 50 per cent complete. I don't know that the present purchaser of the Government timber will ever use a foot of that rail line, or that he will use the mill that is now 50 per cent constructed, but if he doesn't he has got to put in the service that will give him the same result.

Q. Now, the fact is, however, that in an effort to develop agriculturally Harney Valley, the Oregon-Washington
667 Railroad (1196) & Navigation Company extended its line first from Juntura to Crane into the valley, isn't that true, and that was opened for operation 12 years ago?

A. Do you say for the purpose of developing that country agriculturally? I would say that was hardly a correct statement, Mr. Spencer. (1197.) I will say that still in 1916 they were headed across the State. The construction was stopped at Juntura in 1914. The decision of the Supreme Court was in 1912, as I remember it. The rehearing was denied in 1913. In any event they stopped at Juntura. The next year they extended it to Riverside and then stopped, and then the following year they extended it to Crane and then stopped, and in 1916 they got into Crane, and then they stopped for a good many years. After that there wasn't any development to speak of, and the population has actually shrunken, since that line was built up there. (1198.) Then they built into Burns under a contract with Mr. Herrick, wherein the Government was involved, for a mill operation that was agreed to be completed in April, 1925.

Q. And the railroad commenced its operation into Burns in December, 1924?

A. Well, they ran their first car in about that time. I don't think they established service quite that early, but then that is beside that point. The first car was in there and you all had a speech to make in September. Now—we are not in disagreement in this respect—we appreciate very much your service in that country as far as it has gone.

Q. But I am wondering whether your estimate of tonnage and the great growth that is going to take place in that territory, with the sugar-beet factories and the extensive shipments of grains, po-
668 tatoes, and alfalfa from the Harney, the Blitzen, and the Silver Creek Valleys, whether or not that is warranted from the past experience of this railroad during the last 14 or 15 years that it has operated into that country?

A. Well, considering that one element alone I would question whether or not—I would say probably your inference is correct, but I don't feel that that is the only element that can be taken into consideration in this matter, and that isn't the (1199) only element that I have considered at all.

Q. Now, you are not going to raise sugar beets and ship the sugar to San Francisco, are you?

A. We will ship it wherever the market justifies, if we can produce it. San Francisco is the distributing market for sugar. Salt Lake is another market for sugar. I won't ship any sugar.

Q. Well, in other words, if this had been a beet-sugar proposition attractive to the extent you indicate in your Exhibit No. 22, why hasn't it materialized during the last 12 years, while the railroad has been operated into that valley?

A. Well, I thought I explained that. My judgment is this, that the development of that sugar-beet industry is dependent entirely upon the development coordinating of the other agricultural products of the valley. We have got to develop other products along with that product. Now, it wouldn't be justifiable under any theory to build our irrigaton projects for the development of the
669 sugar-beet industry alone. We have got (1200) to develop our other products along with it, and they help support one another.

Now, on that score, another element which I mentioned yesterday is very essential to consider, and that is, up to the present time there has been no fuel supply that would justify the development of the sugar-beet industry, but with the coming of the sawmill industry we do have a source of cheap fuel supply available for that kind of an operation. That is for the purpose of developing power and heat. I think there have been some pretty big operations over there in the Boise-Payette Lumber Company in the manufacture of lumber. There is no sugar-beet production near the Boise-Payette. There isn't any, practically, in southern Idaho. The white fly has practically eliminated the sugar-beet production in southern Idaho. I understand the white fly has pursued the sugar beet all the way along through that area, in the raising fields in Utah, and it presents a very serious problem. (1201.)

I have considered the labor question.

Q. You know that during the last session of Congress the use of Maxican labor—there were bills introduced to prevent it through all of these areas that grow sugar beets?

A. I know there has been some political agitation along that line; yes, sir. And it extended and concerned the people engaged in growing sugar beets all the way from the Gulf to the coast. They were back there in Congress in opposition to this legislation and concerned about the destiny and future of their business. With that condition pending, with the fly pest, I think we should figure on sugar beets and the production of sugar as a resource for the cross-
State line. Just for the reason that I explained in my direct
670 examination, the Government entomologist who has made a very careful study of (1202) that situation reports it as being extremely favorable, and the cross-State line is going to help solve our labor problem, particularly in connection with that. Now, please, Mr. Spencer, don't misunderstand me as saying that it is my

judgment that this is bound to come about. It may not happen. I say that this is one of the possible developments of our county.

Q. Well, you put this Exhibit 22 in here as a tonnage resource for these gentlemen to reply upon in estimating whether or not a line could be sustained across central Oregon, did you?

A. As a contributing factor to that line; yes, sir. And I said in my direct testimony that this is a possible development.

Q. Now, this question of soil adaptability for the growing of sugar beets is not peculiar to the Harney Valley, is it?

A. If you will permit me to go into that, I would say that the sugar beet experts that we have had make tests and run analogies in our valley say that we have a soil condition that is superior to anything that they have found in Utah or southern Idaho. As to whether they found the same thing up in Ochoco, I couldn't answer as to that. I have understood that they did. But I don't know the gentlemen that made that statement. (1203.) There is no sugar beet factory up there, and Ochoco has been going for years, and had a railroad in there. But there are other elements in that community that answer that problem from another standpoint.

As to whether they found the same soil condition down in Klamath Basin I couldn't answer that. There is no sugar beet down there.

Q. You know that the sugar beet industry was established
671 at three different locations within the Yakima Valley within the last six years, and that all of them have been abandoned because of the labor problem?

A. Yes, that is correct; I have understood that, but I don't know the details of it, Mr. Spencer. I think in addition to the labor problem that they had a climatic problem that they couldn't overcome; it was too hot, during the summer months.

Q. Well, you engender some little heat up there in your basin yourself sometimes, don't you?

A. Similar to Portland. However, Mr. Spencer, not in the same way that you have in southwestern Idaho or in the Columbia Basin proper at a lower elevation. (1204.)

It gets much hotter in the Yakima Valley during the summer months than in the Harney Valley, and conditions aren't the same. Now, I don't want to say, because I don't know all the factors that made that matter a failure up there, if it is a failure, and I assume from your statement that it is. I didn't make an investigation as to the Yakima country, but I did as to others.

As to Grants Pass and the Rogue Valley, I don't know what the condition is down there, because there is no production down there and I didn't make that investigation. There was a factory built and taken out and abandoned, but they have an entirely different climatic condition in that area, not comparable to ours at all. I don't know who made the study before they went in there, or anything about that. A good many years ago they had a factory in the

Grande Ronde Valley at La Grande, and failed (1205), and they pulled that out. And they raise a good beet there. (1206.) But I will say this: That the sugar beet men have learned a great deal since they put that plant in at La Grande. There were men
672 there that attempted single handed to put in 160 acres of beets and handle it, and you know that is not possible.

Q. They abandoned operations at Nampa, Idaho? They had one there right near you, didn't they?

A. Right close to us. I remember the operation there in that valley at the time it took place, and the climatic condition was one of the factors that made that impossible to handle it in southwestern Idaho.

Q. And with that experience you have got 205,000 tons a year of sugar beet tonnage for this cross-State line in your Exhibit 22?

A. As a possible development; yes, sir.

This livestock is driven from way north of the Harney Valley down to Winnemucca. (1207.)

The livestock business was good in 1907. I wasn't in Harney County, however, at that time; I was in Malheur County. It was generally pretty good at that time. I was engaged in the livestock business in 1905, and from that time it was pretty profitable until 1914. (1208.) It has not prospered as well since the railroad was in there as it did before, but the railroad is not to blame for that in the least. And the railroad can't remedy it.

There are approximately 62,000 acres available for water from the Silvies River for the Harney Valley irrigation district.

Q. I misunderstood you. I thought it was 87,000. That is the figure that Mr. Newell gives here, I see, in his report of 1926. That is about right?

A. No; I didn't use that figure. I gave only the present area actually under irrigation and that has now adjudicated
673 water rights. I did make the statement, however, that in my judgment with the storage of water that that is going to be greatly increased, to not less than 100,000 acres, from the Silvies River and its tributaries.

Q. Do you know what the annual run-off and discharge of the (1209) Silvies River has been since 1904 to and including 1925?

A. Yes, sir; I know. I have been working with that for years, and while I don't have the figures before me I have a very general knowledge as to what those figures are. Our study shows that we can divert and make an annual use by storage of 115,000 acre-feet without any shortage. Now that does contemplate the carry-over in reservoir from year to year of a quantity of water to equalize that flow.

I have seen the report and study of R. J. Newell, an engineer of the Reclamation Service. I have read it very carefully, and with a very great deal of interest. I helped to secure some of the data

that is contained in that report, working with Mr. Newell; I assisted him, I should say; and I helped in bringing about that study by the Reclamation Service. That is the original, procured from Mr. Newell in Denver.

Q. Now do you agree with the conclusion here stated in his (1210) report of November, 1926, "The engineering features of the Harney project comprise the construction of Silvies Canyon reservoir to a capacity of 150,000 acre-feet for a practically complete control of Silvies River's waters; the construction of an efficient irrigation system to irrigate 65,000 acres of land, for which the run-off of Silvies River is sufficient, and the construction of drainage at a total estimated cost of $67.50 per acre." Do you agree with that?

A. Entirely so; based upon the Government figures. But
674 independent of that, Mr. Spencer, as I stated yesterday, we have spent $80,000 of the district's money in making a study through private sources of the same problem, and our engineers reach a slightly different result. They both agree upon the feasibility of the proposition, but the Government estimates of cost are not the same as the estimates of cost of a private project. The Government bases its figures upon an entirely different class of construction and construction under Government supervision is more expensive, I think it is generally agreed, than it would be under private construction. I don't agree with those figures as being a correct estimate of the cost of that district; no, sir.

Q. Is this true in this report: "That outside of the district the Oregon and Western Colonization Company owns every other section, the balance being held in small tracts by non-residents, many of whom homesteaded the land and tried to dry (1211) farm it but failed"; is that true?

A. Well, in a general way it is true. The Oregon Western Colonization Company bought the balance of a road grant that goes through that county, and the road grant had alternate sections, every odd-numbered section, for a distance of three miles on each side of the road; that makes a tract six miles wide through the country; but there has been a large amount of that, and all of that virtually in the irrigated area, has been sold, and they do not own it. They do still own the unprofitable lands out in the dry area.

Q. Is this correct regarding precipitation: "Precipitation in this section is light, averaging about 8 inches per annum during the past 10 years, which is not sufficient for successful dry farming"?

A. That is absolutely correct, we are sorry to say.

675 Q. Well, it is a condition there that I understood you were advocating, the dry farming operations there?

A. Mr. Spencer, I definitely stated that I did not advocate it. And did not say that there would be any tonnage to the railroad that should be figured in at this time as a possible asset to a cross-State line. But I do say that it is a possible development, and I do not

feel, in the light of all we know, that the precipitation records for the last 10 years represent (1212) a fair average of precipitation throughout the area over a period of 50 years.

For my average estimate for alfalfa per acre I use three tons in this report. Our average yield is in excess of that.

Q. How could more than 65,000 acres be watered from the Silvies and its tributaries with the present adjudications that have been made? The Supreme Court have held, have they not—you were in that case?

A. Yes.

Q. That the duty of water there should be three acre feet until November, 1929, when it will run for a test period on two acre feet; is that right?

A. Yes, sir.

Q. Now, with your annual run-off and discharge of 130,000 feet average per year for a period of over 20 years, taking into consideration your evaporation and your loss in transmission and in placing it on the land, how can you hope to irrigate more than 65,000 acres under that drainage?

A. Due to this condition, Mr. Spencer, we have, in that county, fortunately, had a branch experimental station that has been operating a good many years, and they have carried on very extensive experiments in recent years as to the duty of water (1213),
676 and they have produced crops of grain and alfalfa, sun flowers and other heavy yielding crops, and kept a very careful measurement of the water that has gone onto those crops. With that information before us, with the experience that the farmers themselves have had confirming the results of the experimental station, we have found that we can use a much higher duty of water than was allowed by the engineers. It is true the constituted authority has fixed and given them the right to two acre feet. However, when the irrigation disrict is in operation these rights all merge in the irrigation district, and then the irrigation district is the distributing factor and it virtually does away with your adjudicated water rights. There is a settlement between the land owner and the irrigation district, and his rights are no longer individual rights but merge into the district.

Q. Now you would not expect the farmers generally to operate with the same degree of success that Mr. Shattuck operates this experimental station over there, would you?

A. Well, that involves more history of our country. When the experimental station was established, Mr. Spencer, it was deliberately put upon the poorest quality and the poorest piece of land in Harney County, or in that area of Harney County, I will say, in the north area of Harney County, for the purpose of seeing what could be done with our poorer types (1214) of soil, because our better types of soil had been very well developed. I will say this definitely, that from my absolute knowledge of records made, tak-

ing the thresher measurement from field after field, and from considerable areas, that we as an average exceed the results obtained by Mr. Shattuck on the experimental station. Now I refer,
677 when I say "we," not only to Harney Valley itself but to the Blitzen Valley south of the lake a distance of 70 miles—60 miles away from the experimental station.

Redirect examination:

Q. (By Mr. McCULLOCH.) Mr. Duncan, if the cross-State line were constructed, such cattle as went west to Portland or Puget Sound markets on the north or to California markets on the south would be of what type? Would they be feeder or fat beef cattle?

A. In large quantity they would be fat beef cattle, fattened on our own products. With the development of our irrigation projects we are going to have a surplus of chopped feed that can go into the development of the finished product, and we will put our beef and our mutton and our hogs as well into (1215) these markets ready for slaughter, are not as feeders. If the cattle from Harney County should be shipped east they would still be heavy feeders. They would be a better quality of feeders than we have now, providing we give them a good feed on our own lots and then they are sent east under what we term heavy feeders. Now they are all classified as light feeders. They would not arrive in the eastern market ready for slaughter. The quality of beef delivered in the eastern market, as I understand it, demands a better grade than we could get there.

The purchaser of the tract of 890,000,000 feet of pine timber in northern Harney County from the Federal Government is Edward F. Hines Lumber Company, of Chicago. They are a very large firm and a very responsible firm.

Mr. McCULLOCH. I think that possibly I should make another explanation that would be of assistance to the examiner in this matter. The Eastern Oregon Livestock Company, which has been referred to by Mr. Spencer as the Swift interests, own at the
678 present time 140,000 acres of land in our county, of which 90,000 acres roughly is under irrigation at the present time. Now they have formerly been in the livestock (1216) business, and their cattle generally was sold to the Pacific Livestock Company and in conjunction with the Pacific Livestock Company's cattle their movement was to Winnemucca and thence to the San Francisco Bay points. The Eastern Oregon Livestock Company has ceased the production of range cattle and beef. They are selling their lands. Now they are offering their lands for sale, I will say, and we are making every possible effort to sell that land rather than to restock it. We have placed quite a number of people on that property and will subdivide it in any acreage that is desirable. The Pacific Livestock Company at the same time are selling off their properties. When these shipments were being made from our cattle into Winnemucca, they were large owners of lands in Nevada. All of their

ranches in Nevada, except one, have been sold. They have sold a number of their Oregon properties and their lands are being cut down and are being put into the hands of the smaller livestock men, and those large shipments are not going to continue from our area by trailing them across to the Winnemucca point. Now I call attention to that for the reason that it is important to consider, because the small livestock man who is taking up these ranches and making individual operations out of them will not make the same shipment. He must look for a shorter and more direct market for his product, because he (1217) can not afford, from the standpoint of cost, to take a small bunch of cattle that long distance, and buy feed and deliver them, because the cost is too great. It costs almost as much to deliver a couple of hundred head as it does to deliver
679 2,000 head. The difference is slight. So that the movement from the small producer must be in that direction, and his output and his market outlook both depend upon some other method of getting his product to market. If there is no relief by the cross-State line shipments will increase from Burns and Crane as a result of that condition. It is 30 miles between Crane and Burns.

The extension was constructed during the years 1923 and '24 and put in operation shortly following that. It was constructed to take the timber out from Burns through the purchase of this same Bear Valley tract I have mentioned by Mr. Fred Herrick. Approximately 30 cars a day were contemplated at that time from the mill. (1218.) The estimated cut is 75,000,000. I probably should make a statement about that. Mr. Herrick's contract called for an annual cut, average cut, of 50,000,000 feet of Government timber, but in addition to that Mr. Herrick had in private ownership a considerable acreage and a large stand of yellow pine, and the capacity of his mill, instead of being 50,000,000 feet, was 75,000,000 feet. That computation was based upon a 75,000,000 foot production. If his cut was 50,000,000 feet of Government timber alone, the daily shipments would be about 20 cars.

Mr. McCULLOCH. Mr. Examiner, the annual number of cars on a 50,000,000 foot production, at the rate of 25,000 feet a car, which is average, would be 2,000. 2,000 cars would represent the annual movement of a production of 50,000,000 feet.

Exam. ROGERS. What I was getting at was when the application was made for a certificate of public convenience and necessity the prospective traffic which the carrier had before it when it built this 30 miles.

The WITNESS. Well, there were no other elements consid-
680 ered (1219) for that extension except to secure this timber tonnage.

I do not know what the construction cost for the 30 miles. I know in a general way what the construction cost up to Bear Valley, 50 miles of it. I am not even accurate on that.

Recross-examination:

Q. (By Mr. SPENCER.) You state, Mr. Duncan, that you figure 30 cars a day roughly. Now for 300 days that would be 9,000 cars a year. At 25,000 feet to the car, which is the average loading in a box car of pine lumber, you would have 225,000,000 feet a year.

A. Well, then, I am in error, Mr. Spencer. I made that statement hurriedly without making the computation. What I wanted to give and what I did give was the total figures without reducing them to carloads. It just ran through my mind it was 30 cars a day. I may have been in error about that. But the total tonnage I am positive of. On that basis the cars produced would be about one-fourth of 30 per day. (1220.)

The elevation at Drewsey is about 3,500 feet. It is on the Malheur River and has a drainage outlet to the sea as distinguished from the rest of our county. It is the only part of our county where the drainage is into a flowing stream which reaches the main streams to the ocean.

Exam ROGERS. Just one question. Are we straight now, that the justification for this 30 miles was prospective traffic of about one-fourth of 30 cars per day? Is that what you want to say?

A. Well, I would not want to put it in carloads, Mr. Examiner. I will say that the justification of that railroad was to reach a cut estimated at 50,000,000 feet of Government timber annually, and in excess of that a considerable cut of privately owned timber,
681 which would be approximately 25,000,000 feet a year. Now I haven't reduced that to carloads. I would be glad to do it, but I would not want to be accurate in making the statement without doing it carefully.

Mr. SPENCER. It will be agreeable to us, Mr. Examiner, to have the application to the Interstate Commerce Commission for this certificate of convenience and necessity and the traffic (1221) showing introduced in evidence, if counsel want it that way.

Of course we are in there with this extension from Crane to Burns running right through the heart of your prospective irrigation district. It does run right through the Harney Valley, doesn't it?

A. Yes; it reaches it as well as any railroad could, Mr. Spencer.

Comr. MCMANAMY. Wouldn't it be sufficient to have a stipulation made that we could refer to that application for certificate of convenience and necessity?

Mr. SPENCER. Yes. (1222.)

Q. (By Mr. SPENCER.) I wanted to ask now if they can get an operation started at Burns of this timber from the Bear Valley, and this Government unit, why, there is another operation possible from the eastern part of the Ochoco that would come right in there, isn't there?

A. Yes, sir.

Q. And those possibilities have obtained there since the line was built—that is, that last 12 years, since the line was built into Crane? That is, the timber has been there?

A. The physical conditions have not changed any in that time. The difficulty has been in getting them blocked out and getting capital interested to go in there with an initial operation.

682 That is influenced by many considerations, too.

Q. You don't anticipate that your lumber operations are going to continue with only this one mill of 60 or 70 or 75 thousand capacity, do you?

A. Well, your assumption of capacity is not quite correct. (1223.)

Q. Mr. Duncan knows the conditions up there and I wanted to ask him whether the possibility for increased operation is not present; I mean, another mill alongside of this one they have got there?

A. Sure it is, Mr. Spencer. There are two hot springs in there, that the mill pond is to be fed from. There are other locations where there is a possible development, aside from Burns. At Burns that is the location for a milling operation. The possibility is there of a concentration in development like Bend, but not as extensive as at Bend, I would say. (1224.)

H. H. COREY was thereupon recalled and, having been previously sworn, testified as follows:

Direct examination:

The Malheur Railroad Co. built and operates the line of railroad extending from Burns to Seneca. That railroad company files tariffs with the Public Service Commission of Oregon. It makes annual reports to the Public Service Commission of Oregon under the State law. It is in no different classification with respect to a common-carrier status than the O.-W. R. & N., Southern (1225) Pacific, or any other railroad filing tariffs and making reports to the Public Service Commission of Oregon.

683 Exam. ROGERS. Before we get any further away from it, let the record show that the application which was by agreement given reference to just before recess, was I. & S. Docket 3339, reported at 86 I. C. C. 264.

The WITNESS. That pertains to the railroad from Crane to Burns. I am speaking of the road north from Burns to Seneca.

As to the provisions of the laws of Oregon relating to the transportation of livestock within the State—the statute provides that "Whenever there shall be tendered at any station for shipment over any railroad, livestock to the amount of 10 carloads or more, or when the total number of cars of livestock on any train shall be 10 or more cars owned by one or more shippers, destined for delivery at a common destination or point of connection with another railroad or carrier, it shall be the duty of the railroad to (1226) transport such shipment of livestock over its line from the point where received to the point of destination or delivery to a connecting carrier, as the

case may be, at an average rate of speed not less than 13 miles per hour." That is section 5932 of the Oregon Laws.

R. W. Cozad was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct examination:

I reside at Burns, Oregon. I am engaged in farming and stock raising. I have been engaged in that business in Burns for 11 years, in Harney County. Prior to that time I lived in Grant County (1227) and was engaged in the stock business. I am familiar with the agricultural development of Harney County, particularly
684 in the vicinity of Burns. A part of my place is irrigated and part of it is dry. My irrigated land I am watering the last year or two with a pump, pumping from a well. The depth of that well is 60 feet. The water raises to within about eight feet of the surface and our pull down is to about 28 to 30 feet. Including ditching and leveling as far as I have gone with this tract the total investment in my pumping plant is approximately $2,500. That includes the cost of my well and the power for lifting the water, and the pump. (1228.)

Q. If the evidence in this case shows that the cost of the well at the experimental station in Harney County, Oregon, is $3,500, how do you account for the difference between the cost of your well and that of the State's well?

A. Well, our equipment is hardly the same, and a greater part of our own work we did ourselves, or I did myself. I did my own work in putting it in. My equipment is sufficient, but not as complete as the station's. My plant is sufficient for all purposes that I am using it for.

Under the irrigation system I grow chiefly wheat and alfalfa for hay. I have 160 acres in wheat. The average yield of wheat per acre from my irrigated lands is 50 or 55 bushels. (1229.) That is from the entire acreage. I observe what other farmers are producing in the vicinity in which I live. All of them thresh about 50 bushels of wheat on the irrigated ground. The fair average of wheat from the irrigated lands in the Harney Valley project is 50 bushels. The average of barley produced in these same fields is 55, or probably a little more. The fair average of the production of alfalfa is three to three and a half tons. I have about 200 acres in alfalfa. That is producing three tons to the acre. Other people raising alfalfa in that vicinity have about the same field produc-
685 tion. (1230.) That is on considerable areas. Grown on large tracts.

As to why there has not been a greater acreage in alfalfa in Harney County, particularly under the Harney Valley project, there has been no market for a lot of that kind of hay. It has been an overflow system on a part of it until lately, when they started control, and there is very few pumping plants under operation at the

present time. I think there are three pumping plants there in operation. They have been put in within the last two or three years. The overflow, irrigated land in that county could not be used for the production of alfalfa hay under present conditions. The water is not controlled and alfalfa won't stand that overflow. (1231.) With a storage system developed that land would be suitable for the growth of alfalfa, and grain crops.

I have had experience in feeding cattle and shipping finished cattle to the market. I have fed from three to eight loads of beef and finished them every winter there on the crops I have raised, on the wheat and alfalfa. I feed them alfalfa and chopped wheat and barley. I market all of those cattle at Portland. In reaching the Portland market our shrinkage has been more than it should have been, I think. The shrinkage is about 60 pounds I think on 1,050 pound steer or 1,100-pound steer. That shrinkage is—any weight we take at home is after a drive without feed or water, or four per cent shrinkage (1232) at home when we sell, and this other shrinkage is on top of that. For instance, if we sell at home our drive is considered to be eight miles without feed or water, or if you are weighing off of a feed lot, a four per cent shrinkage at home. The shrinkage on board the cars is 60 pounds in addition to that. That is practically 6 per cent on the animal we ship to Portland.

686 The buyer, when he is buying cattle in Harney County takes an arbitrary shrinkage by agreement with the grower at the point where the cattle is delivered of four per cent. Then any shrinkage in shipment is in addition to that (1233) amount of shrink.

These cattle we are fattening reach the Portland market in a satisfactory condition other than the shrink. There is no depreciation in their quality from the time they leave the county until they reach the market at Portland that I know of.

As to what benefits would accrue to the stock grower in Harney County by reason of the construction of the cross-State line to a junction with the present constructed Natron cut-off, it would give us an access to the California markets, which is pretty near impossible from where we are now. I have never myself shipped any cattle to California. It has been too far. As to whether the quality of cattle I have been shipping would be ready for slaughter if I had shipped by the existing lines in to the San Francisco market, I have never tried it, but I have understood they would not be. (1234.) With the construction of the cross-State line the shippers and everybody tell me that we would be able to reach the San Francisco market with those cattle in good condition. Cattle buyers from California are coming into our county and purchasing the livestock of the small growers in that county. I suppose to reach the California market they would be shipped by train around by Ontario, or overland drive south. I don't know whether any have been driven out of the county by California purchasers this year, but they have been the last few years. I think some were last year.

I think the construction of the cross-State line would bring more competitive buyers from the California market into our community. It would open up both markets on a competitive basis. (1235.)

687 It would enable us to ship to the best market at the time.

The feeding and fattening of livestock on hay and grain in Harney County could be extended. It is not being utilized at the present time to its fullest capacity. Very little is hardly touched. It is a suitable climate and is producing a suitable feed for the purpose of fattening animals ready for slaughter. Climatic conditions are very good. It is high and dry. Conditions are good for feeding. In my judgment that could be extended and expanded extensively.

Irrigation from my well has proven successful. (1236.) The whole neighborhood is contemplating that kind of a system for all the land that is not under the irrigation system. That will bring into irrigation an area other than the present irrigated lands, and will add to the irrigated area of Harney County. I am now irrigating about 60 acres at the present time from that source. There are 400 acres under my well and I contemplate irrigating 80 acres from this one well. I think the average unit per pumping plant through that area will be about 80 acres.

Q. (By Mr. McCulloch.) Mr. Cozad, if this cross-State line were built it would shorten your distance to the Portland market 148 miles. In your judgment would that be a substantial benefit, that shortening of distance in getting your beef cattle to the Portland market?

A. Yes; it would. We feed on the road from Burns now at Huntington. We can't make the run in one without a feed and stop. (1237.)

688 Cross-examination:

I ship from Burns. I have shipped from Crane before the line was built to Burns. I range in pastures inside, not in the mountains. I have no Government range allotted to me. I have a small herd of steers, 150 head on hand at the present time.

J. C. Cecil was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct examination:

I reside at Suntex, Harney County, Oregon. (1238.) That is on Silver Creek. It is in what has been referred to in this case as the Silver Creek district. That district is about 28 miles west of Burns.

I am engaged in the livestock business. I was born at that business. All my life, you might say. I am 43. That time has been spent entirely in Harney County. I operate in conjunction with my father. I own other properties than the upper Silver Creek Valley in the lower, in what has been referred to as the Warm Springs. That is 30 miles from my main ranch. (1239.) My

father and I run in that country from 1,000 to 1,400 or 1,500 cattle. They range in forest reserves and around on the border of the desert, Government land. We market our cattle at various places. We usually sell them to local buyers. Buyers come in and we deliver them, one perhaps at Prineville, Lakeview, Silver Lake—in most any direction—Burns. It is 100 miles to Prineville, and about the same distance either to Silver Lake or Lakeview.

The proposed cross-State line would enable the purchaser of our cattle to take them out better and perhaps it would reflect
689 in that way. We have never shipped ourselves. We deliver them to buyers that do ship out or take them out. (1240.) We depend on a local sale of our stock. If the cross-State line is built the bulk of our cattle have come west and south. That has been the way they have been going. They have been driven overland. With the construction of this railroad they would be shipped.

I produce some alfalfa in my country. I am in an irrigated area. We are new in the alfalfa game. We have had about three or four years experience. We have been getting from three to four tons per acre. That is of cured hay in the stack.

Q. Now, Mr. Cecil, there has been considerable reference in (1241) the testimony in this case to a so-called High Desert in central Oregon. Are you familiar with that country which we generally call central Oregon, extending westward from the property you have described to the Cascade Mountains?

A. Yes. I have had occasion to operate in that desert. I am very familiar with the use that desert has been put to in the past. It has been used for winter grazing. To a certain extent it is so used at the present time, but not to its fullest capacity. The construction of a cross-State line would assist in the utilization of the feed that is grown on that area. The feed would be more completely utilized. It would increase the number of livestock and sheep that go out there annually for grazing. (1242.)

Under present conditions of the high price of livestock feed in particular, owners and bankers no longer care to take the risks that are assumed in going out on the desert. About on an average of two out of 10 years there are bad winters that will collect a toll of from 20 to 90 per cent of the sheep that go out. In other words, they are snowed in and lost, or perish. With a transportation
690 road east and west across the State it would be possible to put emergency supplies of feed at strategic points and the livestock could be moved to this feed and then they could be either shipped out or additional feed taken to the desert. Such a condition would undoubtedly result in repopulating that desert with livestock.

That desert produces a native grass and more or less browse. The production of that area is practically the same as the Harney County line east of our properties.

Q. And the only factor that has prevented its use to the fullest capacity has been the lack of water?

A. It makes it impossible to graze during the summer months on account of the lack of water.

There are some wells out in that area. (1243.) I have personally run some stock out on the desert area that has been mentioned. We have ranged livestock on the desert for a great many years. In 1925 or '26 we moved out on the desert with a 1,000 head of cattle, watered them from a well for four months. We pumped their water supply. That operation was practical.

With the construction of an east and west line across that county, it is my judgment that the country will be developed then for the production of livestock, both sheep and cattle, in excess of its present production. It produces an equal quality of livestock with the other grazing sections of eastern Oregon. It is the same proposition. (1244.)

Suntex is a little north and west of Riley. You see, we move our post office around every once in a while.

Q. Do you have at Suntex wells in addition to the waters of Silver Creek for your domestic supply water and cattle, or do you depend on the waters of Silver Creek altogether?

A. We depend upon the water of Silver Creek at the ranch,
691 if that is what you refer to. Wells have been drilled in the vicinity of Suntex to produce water for domestic purposes. Across this country that I have spoken of wells have been drilled to provide water for cattle and human consumption in various places that I have observed. With such wells to provide water for human consumption and for cattle, and a cross-State railroad to move cattle and sheep out and to bring feed in, it is my judgment that that country would support an extensive livestock industry. (1245.)

My place lies west of Burns, in Harney County. Suntex, right on the west line of Harney County. For years it was called Riley.

That so-called High Desert area is very rank in places. It varies. We find everything from small brush to heavy brush. There are large areas where the sagebrush is extremely large. On that type of ground I have understood it is an indication of the fertility of the soil. I don't know anything about it, though, from personal experience—the soil conditions. (1246.)

We ranged horses for a great many years, horses and mules, from a point probably 10 or 15 miles south of Bend, clear through to Lakeview, Silver Lake, all over the entire desert, a radius south and west of 75 miles from the ranch. My testimony with reference to the possibility of utilizing the area applied to this entire desert area. (1247.)

Cross-examination:

We use the desert for the winter range. Up until the last two years we have been running a percentage of our cattle on the desert, a various length of time; we start in with the bulk of them on, and we go to pulling them off, say, by the middle of December the

winter starts, we will say, and then we go to taking those off the desert. It would depend upon the weather. Some of them
692 would stay practically all winter. The average year we have perhaps the bulk of our cattle in by the middle of January or first of February. We put them out first about the latter part of October, usually, the first of November. We are in striking distance from the ranch, on Silver Creek. That is above Riley (1248), or Suntex as it is called now. I mean by striking distance it is about 25 miles to the border of the desert from the ranches there, from the Buck Creek side, we will say, and we move over onto the Buck Creek side with our outfit and we can cover this territory from there.

Q. Oh, you operate two ranches—one up on the desert, and one on the Silver Creek proper?

A. Well, we have a camp over on the desert in the fall of the year.

Q. But you mentioned two ranches, one up above Suntex, and the other one down——

A. Above the Double-O, in what we call the Warm Springs district. They are 30 miles apart. We operate both of them from one headquarters. The headquarters is on upper ranch, upper Silver Creek, Suntex. (1249.)

In the summer we range them in the national forest. That is north of upper Silver Creek. It is six miles to the reserve boundary. We pasture them in the reserve. That right is obtained by a method they call allotment. They allow so many acres to you in the reserve on the basis of the herd that you carry. They limit the number that you can pasture per acre. That reserve is pretty well taken up.

Q. And you have got to have enough summer range in the reserve to take care of the livestock that you use or feed on the desert in the winter, haven't you?

693 A. Well, not necessarily in the reserve, because there is a certain amount of territory adjacent to the reserve that (1250) could be used for either spring, fall, winter, summer, or any other grazing. It is Government land. It isn't allotted. It is unappropriated Government land. You just simply move on and feed, turn the stuff loose. That is pretty well grazed now. At times the storms on the desert are pretty severe. Snow storms. As to the usual snowfall there, I would say there will be winters—now, a winter like last winter, two inches was probably the maximum depth, the most of the desert, and the snow went off so quickly that there probably was a lack of snow, there wasn't sufficient water for camp purposes and for sheep; and then there will be a maximum depth of possibly three or four feet (1251) that will come in 24 to 36 hours. Such storms in the winter are infrequent, as a rule. There probably won't be more than one heavy general storm in the winter.

The light snows go off quickly, within a few days after it falls. Heavy snows will probably last maybe two or three weeks.

The summer pasturage that is available is worked practically now to its capacity. We could increase it to this point, if by shifting, we will say, a definite number of livestock to the desert, we will say, for two months, then you have simply created two months' grazing, and to that extent it can be enlarged.

Q. Well, if you haven't got the summer range for them when (1252) you have to take them off the desert how are you going to take care of them?

A. We have the summer range, we would have the desert, and then we have the spring and fall range that could be used for—it could be held over. If we stay on the desert for two months, obviously there is less grass consumed on this land that is
694 adaptable to either spring or fall use, or it can be conserved, it can be used for summer. You see, we are right on the border there. The Government land is right around the reserve. We are not limited to any strict herd law. They permit a drift system. We are given an allotment, so many cattle, and then we have a drift system in vogue there, in and out, in and out of the reserve; part of the time they are in the reserve, and part of the time they are out of the reserve. The entire community operates as one over there. The feed in the margin of the reserve and in the reserve itself is exhausted with the coming of winter, largely.

Q. Whether you feed it or not?

A. Oh, no, no.

Q. Is it bunch grass?

A. Bunch grass. It can be held over. (1253.)

We can only feed so many herd of it under herd regulations with the Government.

Q. Well, you wouldn't feed any of it to excess, as far as that is concerned? You would destroy it if you did, wouldn't you?

A. That's the theory, yes, sir. We limit the number that we feed within the reserve or outside of the reserve.

Q. Well, there isn't any possibility of any great increase, then, is there?

A. Well, as I say, that increase—whatever grazing can be created, whatever—if it is possible to put 100,000 sheep on the desert
695 two months, why, you have created two months' grazing for 100,000 head of sheep. That is what it comes to.

Q. You run sheep and cattle both, don't you?

A. No, sir. (1254.) I mentioned sheep several times because I am quite familiar with sheep, because our neighbors, so many of them are in the sheep business.

We have ranged on the desert in the Christmas Lake Valley. We haven't had livestock on the desert for some time, and they were largely horses and mules. We did not range our cattle there as it was too far from our base. Men who live on the Silver Lake side naturally graze their cattle there, the GX people, and people around

Risley, and over on that side. (1255.) They usually, I believe, take them out of the mountains and put them onto the desert along in—it depends on the storms. We will say approximately the first of November. And then they take them off somewhere around the first of the year, I imagine; it varies with the season; depends on weather conditions absolutely.

Q. You talk about your driving and selling at Silver Lake. How do you happen to sell at Silver Lake? There is no transportation there, is there?

A. We trailed them to Silver Lake. We found a market at Silver Lake, residents. At Silver Lake they winter them and take them through the Klamath Marsh, and summered them at the Klamath Marsh, and that was their intention, to ship them out to San Francisco this fall. We had reference to Silver Lake in Lake County. (1256.)

Redirect examination:

Q. (By Mr. DUNCAN.) Mr. Cecil, do cattle reach the desert for grazing purposes from any districts other than your own, from Silver Creek?

696 A. Oh, yes. They come into the desert from all sides. The desert use isn't limited to the grazing facilities that exist within the vicinity of our ranches.

The dry bunch grass is first class food, I would say, for livestock. You couldn't compare it with grain. When I say first class, I mean as compared with any other forage. Compared very well with cured hay. (1257.)

Three years ago, I believe it was, I shipped some livestock from Burns to Crane. (1258.)

WILLIAM HANLEY was thereupon produced as a witness on behalf of complainants, and, having first been duly sworn, testified as follows:

Direct examination:

My headquarters are in Harney County. I generally go to the ranches in Harney to start some place else. I have always been a resident of Oregon.

Q. Well, how long have you taken an active interest in the development of Oregon, then, so that the record will show how long your activities have existed over this country that we talk about?

A. Well, probably seven years old. I have been in the livestock business and in the development of those kindred industries for a period of over 50 years in Oregon. I came into Harney County in '79 to develop my properties there. (1259.)

I own and operate in Harney County now probably 35,000 acres. Prior to coming to Harney County I operated in the Rogue River Valley, two miles below Jacksonville.

The development of the livestock industry in Oregon has been my business for life. In addition to that I have taken
697 interest in the development of the State of Oregon along about all lines.

Q. Have you examined the transportation problems and difficulties of Oregon, particularly, first, relating to the Central Oregon country?

A. The first trip that I went into central Oregon, my father was with me on top of the Cascade Mountains, and I didn't know just where I was going, and he knew something about the country, and he had been in the Klamath Falls earlier than that—he had been in the Klamath Falls, and I had been with him, and we looked over the Klamath Falls country and we looked at it as a grazed-out country at that time—and about the last mandate he gave me was to go until I found a big country and (1260) keep it in my mind I wouldn't get any bigger than the country I got into. He said, "Don't worry about transportation. It will come across the plains to get this timber." And that was the mandate that I went into the country on the transportation idea.

Q. Now, were you in the country, in the Harney country, prior to the construction of the railroads into Crane, into Lakeview, into Klamath Falls, and into Bend?

A. Oh, when I went into the country the Central Pacific was the only operating road. Winnemucca was our station. We took our first drive of cattle to Winnemucca; I think the first we took out of Harney County we took to Winnemucca. I was there prior to the construction of the Oregon Short Line; the Oregon Short Line came in in the first of the eighties.

In the course of my activities I became personally acquainted with some great figures in railroad development of the West. The earliest transportation that was pointed across the country was from
698 Yaquina Bay to Ontario. That was after the O. W. R. & N. had started under the heading of—well, I don't—(1261) Corvallis eastern, I think J. Eginton Hogg, and he didn't get farther than up on the Cascade Mountains—I don't just remember the place—and he held a right of way in the Malheur Canyon pretty well through the eighties; but it was always a constant rumor that somebody would take up the railroad and somebody would build a railroad. The first railroad that was—well, I sold out of the cattle business and came back to southern Oregon in '82, and then I was interested in—for a few years, in the building of the road from Roseburg to Ashland; then I came back again and was interested in the building of the other end of it, from Redding to Ashland.

Oregon has had a complete history of stub-line railroad building. Never in its history has it ever had a railroad that didn't go along to some point and, as we would call it, "keg up" all the way from 10 to 20 years—some of them "kegged up" yet—and then some

other idea would come along and move them on another piece. That has been the continuous history of Oregon.

I got interested that we would have one railroad to build right across the State, and Mr. C. E. S. Wood, E. Jofer, and Grimes of Coos Bay, and Addison Bennett—I think that was my main show company. I started out on Mr. C. E. S. Wood and converted him to the theory that Oregon never could develop without it had a cross-State railroad, and then give him my plan for building, and that there was no other railroads in (1262) the State except the Harriman lines, and we had definitely the information from Mr. Kruttschnitt that the country could wait, that it was bottled up, it took all the money that they could raise—which I think it did—to build lines in competitive territory on the O. W. R. & N.

699 Now, I will refer to the records as being the best proof. Then the legislature was assembled—before that we had been doing some campaigning through the State to build up a public sentiment for the cross-State line, but when the legislature met Mr. Wood and myself urged for a joint session, after they had organized and had their speaker and president of the senate which was given to us, and Mr. Wood addressed them, and then we introduced the resolution that they would have to pass to refer the modification of the constitution of the State of Oregon to issue bonds to build its own railroad across the State. This greatly wrecked a plan that the boys had organized to work under, to put such a measure through. There weren't much room in the newspapers for anything else, vice versa. I remember quite well Mr. Harvey Scott raving at the idea as being so socialistic, and that if it was just run by the balance of my company that he wouldn't feel so bad about it, but for me personally to introduce such a "damn socialistic idea" was more than the Oregonian could stand. Mr. Jackson, of the Oregon Journal, was just a little stronger on the other side, and all the State papers taken it up pro and con, and it was (1263) the whole working of the session of the legislature. Even my partners and friends have told me that was against me that if I went to Salem that I couldn't find my own bill, and I always managed to find it, and we got it passed before the legislature was over. That was, I would say, 1905 or 1906, but the record of that legislature will show.

That spring Mr. Hill got word to me that he wanted me to come back to St. Paul. I went back to St. Paul—of course I had met Mr. Hill a good many times before—and when I went into his

700 office he pulled out a drawer that he had full of these clippings and he laughed about it, he thought he would like to see somebody to stir the hair up on them; and he said, "You are doing a mighty good job to stir your State up." He said, "You are right; your State can't develop without it gets transportation, and you are not going to get transportation without you make a fuss about it." He said "If you can't build a railroad any other way than to get your State to sign your bonds it is the best thing for

your State to do, and the people of your State eventually will stay with you. But you don't have to do it that way. I will build your railroad for you." He said, "Harriman ain't been very good to me since we dissolved our merger; he kind of fell out with me. We were pretty good friends while he was starting in, but since we (1264) dissolved that he hasn't been a very good friend of mine. Then he went into Seattle. He knew that was my town. He knew that I went into Seattle when it was a little place, and Seattle has built up. I knew when Harriman wanted to come in that he would get in." He said, "You know, when you have been there with the people so long and they have got used to you they wouldn't keep nobody out because you wanted them out. So I really helped Harriman a little to get into Seattle. I didn't do it because I liked it, but I done it just to show Harriman that I wasn't a bad fellow. But I want to play him a return game, and I am coming up there into your country with you." Of course, I was very grateful to get a partner like that at that time, and that started the building of the line up the Deschutes; and when that start was made the Harriman lines commenced building up the Deschutes, and I met Mr. Billy Cotton in New York at the Waldorf, and he said to me that I ought to be satisfied now, that I had got trouble enough stirred up. "Well," I said, "Mr. Cotton, I am not satisfied.
701 You have got no right to take our central Oregon money and put it into Deschutes Canyon. You know you don't want a road up the Deschutes Canyon, and we are entitled to that money first to build a line east and west across the State." He said to me, "Will you go and tell Harriman that?" "Well," I said, "sure, (1265) I will be glad to tell Harriman that." I said, "He has got no right to spend the money on Oregon railroads in central Oregon in the Deschutes Canyon." I went down with Mr. Cotton, and we had a visit with Mr. Harriman, a very short visit. Mr. Harriman put the question up to Mr. Cotton, "Eventually won't you need the north and south line along there?", and Mr. Cotton said, "Yes; yes, I think probably we will." "Well," he said, "go ahead." That settled that.

Then we persuaded Mr. Hill to come up the Malheur River. The line there had been laying under survey and had been renewed under the Harriman line, the east and west line, had been renewed, and we persuaded Mr. Hill that he ought to have the right of way up the Malheur Canyon and take and build that road. And Mr. Hill agreed, and Mr. Wood and I went up and bought the whole bottom of the Malheur Canyon from above the Harper ranch to Riverside. We done it under the barrage of the State's plan. Everybody accepted that because they knew we were both crazy on this railroad. Nobody thought that Mr. Hill was interested in the Malheur Canyon. We went on through his instructions and projected a line up the Malheur River, that is, a survey for Hill, still under the State-aid line. Then they were getting pretty well up the Des-

chutes—now, I am not keeping definite track of the years; the records of this will just definitely give the time that all these things
(1266) happened. Mr. Hill, for some reason—I saw him back
702 in St. Paul, and that is when he told me that he had let Judge Lovett have the right of way up the Malheur River. He was very much an admirer of Judge Lovett. "Well," I said, "You made a mistake." "Oh, no," he said, "I didn't make no mistake." He said, "I got all that we need, and," he said, "Judge Lovett will build your road across the State."

Probably that season we commenced building the line up the Malheur River, a full standard line. I went down several times, talked about the conditions of building a line across the State. Built up to Juntura, and stopped there a little while as time goes on in Oregon, a year or two, then we got it started off again and built 20 miles more up to Riverside, and there we got hung up pretty good, four, or five, or six years. Mr. Farrell said, "I am going to lay down on my board and see if we can't get money enough to get on up to the Harney Valley." I told Mr. Farrell that I thought probably we could commence to work at some development there if we could get up into Harney Valley; and then Mr. Harrell notified me when he came back that they had the money, and they went ahead from Riverside and built it up into Harney Valley. At that time he told me, "You probably will have to wait a few years before you can get on across. The railroad conditions and the general conditions of the country looks like it will lay there; but," he said, "eventually they will build your line (1267) across."

So the next move that happened with it was the one when it turned north to Burns and to Bear Valley for the timber. I feel like I have been rather indulgent, and still fair. The war came on. Then, after the war and the readjustment, which has put the people in the country in pretty hard circumstances. No country for the past 10 years needs to talk about any kind of development.

Next time that I got interested in the line, I think, goes
703 back about four years ago, and that came out in the transfer of the Central Pacific to the Southern Pacific. This, from a country standpoint, is a real mistake. It should have never been turned over to the Southern Pacific. The Southern Pacific is a north and south line, and in the separation there could be no other base only a north and south line. The Union Pacific is an east and west line, and the base of any settlement of separating the two roads from the differences that there were in between the management of the Harriman couldn't fairly be under any other base. If a railroad holds a country it must be responsible to the country for service, and when you take a piece out of the center of it and turn it over to the other road there ain't no definite line, and the country itself has no place to charge up who ain't giving them service.

Now, we tried hard to keep the Central Pacific from being transferred to the Southern Pacific. After that was done, our (1268) Oregon tonnage was transferred to the Southern Pacific to originate it, which I don't quite understand how the people of Oregon can go to bed and sleep sound of nights with the originating of their tonnage promised noncompetitive with the Union Pacific under a contract of delivery at Ogden. And with me as representing the State of Oregon I think it is a very serious fight and condition with Oregon, if it is going to be forced onto it as a railroad, the promise under these agreements, which has had large sums of money spent on them, to come at this time and start to move this tonnage all south and junk all Oregon harbors and go off and leave an investment of $30,000,000 or $35,000,000 to be charged up against our rate structure as local lines. Under this contract to build the
704 east and west line across the State, which was from Coos Bay to Boise City, the gap has been closed in from Coos Bay to Eugene, and from Ontario, Oregon to Crane or Burns. This agreement with me representing the State of Oregon could be modified by any trade between the same system and the separation of the same system, with the division of the Oregon tonnage, if it was at the summit of the Cascade Mountains, on the Natron cut-off, and the cross-State line has a right to all the tonnage that there is in western Oregon under the heading and the agreements of its heritage. It is a question of controversy. The State of Oregon had b[illegible] do exactly the thing that it started out with in our original plan and amend its constitution (1269) and let its highway commission go and build an independent line between Crane, Oregon, and Odell, and start out with a pervasive political policy to see that they treat that investment right and treat this agreement right.

I would say that the construction of this east and west railroad that is petitioned for in this case is a great necessity for the development of the entire State of Oregon.

Exam. ROGERS. Won't you take this original plan a little further. What was the original plan when the Union Pacific started to build the Malheur Canyon? Where were they going?

A. Cross-State line.

Exam. ROGERS. What were they going to do over the Cascades?

A. Build the Natron cut-off. They were going to Coos Bay, or to the connection of the Southern Pacific. Of course, the Coos Bay line was agreed along in them years under construction. It went out of the way. (1270.)

Q. (By Mr. DUNCAN.) Now during all these years, Mr. Hanley, then, you have taken an active personal part in securing
705 the development of the State through the construction of these railroads, and going directly to the fountainhead, Mr. Hill and Mr. Harriman?

A. Well, I just kind of naturally fell in with the—contact with them, under the policy that I was following.

Mr. C. E. S. Wood, was the agent in Oregon for the owners of a vast road grant that traversed the State from east to west; from Ontario to the Willamette Valley. And his intersts, from that standpoint, he could speak for the owners of that grant, and did.

Q. Now, isn't it true, Mr. Hanley, that at the time of this original development and the construction of the line up the Deschutes Canyon and up the Malheur Canyon began, that the Union Pacific system and the present Southern Pacific system were all then under one management and not then unmerged?

A. No; they were all under one management. (1271.) The Southern Pacific and the Union Pacific was under the Harriman management. When they were under this single management the tonnage routed east was contemplated to move over that east and west line. That is the tonnage routed east of the place that it originated in, western Oregon. The routed south would go south

Mr. Harvey Scott was the editor and manager of the Portland Oregonian during those years.

Q. And Mr. Cotton, whom you have mentioned, Judge Lovett, and Mr. Farrell were all executive officers of the Southern Pacific Railway Company during those years? (1272.) Before they were unmerged.

A. Mr. Cotton was really the head of the Harriman system in Portland. I would check up on a little incident: Just about
706 that time that Cotton was assuming that position, he was really tendered, as I remember it, the appointment as a supreme judge, United States Supreme Judge, and it was a matter that Mr. Harriman settled but he didn't accept it. Judge Lovett and Mr. Farrell were also connected with Mr. Harriman through some of his operations. Lovett was a Texas man that Mr. Harriman took up to New York from Texas and developed into succeeding Mr. Harriman.

Q. Now, so that the record may not be misconstrued, Mr. Hanley, in your direct statement I believe you stated that you and Mr. Wood bought up the bottom of the Malheur Canyon for the purpose of a hill right of way. By that do you mean that you bought the bottom the entire distance, or just the seeded lands in the portion where the property was seeded and developed?

A. Well, we bought the seeded land and pretty well stripped the balance of it. We didn't acquire title to all of it, some of it being in Government land. (1273.)

Q. (By Mr. ELLIS.) Mr. Hanley, you spoke of the carriers investing some $30,000,000 or $35,000,000 which would now have to be charged up and maintained merely as branch lines under existing conditions. Just what do you have in mind when you mentioned that expenditure?

A. Well, I would have in mind the line from Ontario to Crane—the Burns line is built under a special agreement that isn't involved in that—the line from Eugene to Coos Bay, then the line up the

Deschutes, which, under existing conditions, can be nothing more than branch lines.

Comr. McMANAMY. Mr. Hanley, you have spent your life in the development of the State of Oregon, eastern, central, and western, and are probably as well informed concerning the conditions
707 there as any man in the State. Could you give me your views, for the benefit of the commission, as to what would have been the result of the construction of the cross-State line, say 20 or 25 years ago, in the way of developing that part of the State? What I am (1274) trying to get at is, would such a line have resulted in development similar to that in the State of Washington east of the Cascades, and any other thoughts that you may have in connection with the probable results of the construction of such a line?

A. Well, Mr. McManamy, it leads on into so many different angles. One of the unfortunate conditions of what I call my own country, south of the Blue Mountains and east of the Cascades, that with the barrier of the Cascade Mountains, when the first emigrants came into the country, they were having what they thought was such a struggle coming in, which was mostly caused by being house-raised people to start in to cross the plains. Us fellows that went back onto the plains found it a beautiful place to live in. But those people who lived down here on the west side, they had all the shade and all the luxuries of life, no question about water, but we were completely disconnected with them until that barrier was broke down, there was no understanding. The fellow in the Willamette Valley, if he was going to the mountains, why, he didn't know enough to start to the mountains except to start up on the Cascade Mountains—he didn't know that he was going east and going up to where the world opened up; he had a complete idea that he was going into the mountains and that he would get lost in them—if he started back down again, he didn't know how to get (1275) back down. But Oregon has three of such reefs running across it. The Cascade is the biggest one—north and south. So that Oregon
708 has been to some degree separated, and that is the reason why that's only these passes that pass through the Harney Lakes and the Blue Lakes to get south. So that the people have been widely separated, and it has been the comment since the emigrant times, Oregon is away under in population. It has always been the hope and the dream of the fellow that rambles the plains that sometime he could bring that condition about. Certainly Oregon ought to develop up right agriculturally with Washington, southern Idaho—southern Idaho has gone ahead at the expense of the irrigation funds. Borah—what might not be so much of a political charge—but Borah has been a strong influence in Congress, and Borah has been after reclamation money, and Oregon has been after money to go down the Columbia River, and the heavy influence, the city influence of the State, has been looking down the river, and never looked back up on the hills much, and the sentiment of our State

has not been shaped, so that it has had the influence, apparently, that Washington and Idaho has got, that their cities and their towns, and their influence is out in where the State is at, and we have really been pretty weak along those lines; but I would say that I will give you my best service if you will grant this request that I am making and see that my contract is carried out. (1276.)

As to whether driving stock to Winnemucca is a practical thing at the present time, and at the price that is profitable—that is a wonderful thing, Mr. McManamy. That is the cheapest transportation that ever was, and the most pleasure in it. Of course, a herd of cattle now ain't very much to me. I was raised in the business, and, of course, my main business is trailing cattle. I don't think a fellow that hasn't ever got to trail any cattle ever has any chance to live.

709 Exam. ROGERS. Mr. Hanley, I didn't quite get the point of your mention of the investment of $35,000,000 in these so-called stub-end lines. Why are you concerned about that, if no part of that investment is yours?

A. Well, whatever money that is invested in the vicinity or in the State which you have property in is a part of your investment, and the maintaining of it is part of it. I think that that is really very much misunderstood as a public conclusion. It is the main reason why that it isn't right to allow two lines to parallel one another and spend the money that the tonnage of the country has produced in order to support that capital. It is perfectly legitimate that the country should be protected against that, but, on the other hand, the country shouldn't have any misunderstanding with it, and the (1277) part of that money which is invested in transportation in that country is their burden.

Exam ROGERS. Well, if under the prevailing laws the rates must be fixed so as to yield the carriers a reasonable return on their investment devoted to transportation service, would the level of freight rates be affected by the money necessary to yield that return on this investment of $35,000,000?

A. Well, with the capital that is invested in railroads within the State, in the State structure of the railroads, the lines that will be branches will be part of that structure. That is, a branch line has a very limited rate in accordance with the investment that is in it, to maintain and carry it, and that will be part of the State's burden of carrying their charge.

Q. (By Mr. MCCULLOCH.) Mr. Hanley, suppose this cross-State line all the way from Ontario to Coos Bay had been built and put in operation 25 years ago, and had been continuously operated
710 since then, what is your best judgment as to how the conditions in Malheur, Harney, southern Grant County, northern Lake County, and the territory traversed by that cross-State line, would be to-day if that line had been built and been operated for the last 25 years as a main trunk line from the east border line of the State

to tidewater on the Pacific Ocean, as compared with the conditions (1278) that you find in that country along the route of that proposed line to-day?

A. Oh, with the transportation and the opening up, any time it would come it would change the whole psychology of the State. There is no question about the tonnage. Of course, we are living in a time now that I don't think that any line should be built for local tonnage. The short line idea is passed. We are probably right on the edge when branch lines are apt to commence to come out.

Q. Well, supposing Mr. Hanley, that that line from Ontario to Coos Bay had been built across the State, east to west, as a trunk line, and operated the last 25 years, what effect in your judgment, would it have had in that period down to the present time on the industrial and commercial and agricultural development of the sections of the State of Oregon through which it ran?

A. Well, we would have been on the level with Washington. We would have been on the level with all our neighbor States.

Q. Do you mean by that, in mentioning Washington, that in your opinion the fact that the Northern Pacific, the Great Northern and the Milwaukee all have east and west lines across the (1279) State of Washington has contributed largely to the development of that State, as compared with the stagnation in development in the central portion of the State of Oregon? Is that what you mean by referring to the State of Washington?

A. Yes.

711 Q. Would you say the same thing was true as to the State of California, traversed east and west by the Southern Pacific, the Western Pacific, the Union Pacific, and the Santa Fe?

A. Why, sure. The unfortunate part of the Western Pacific—and I have spent a good deal of time with the locating engineers of the Western Pacific to get a line from Winnemucca to Coos Bay. That was part of the Gould plan at that time, to build a line—to make a Y of the Western Pacific at Winnemucca and run one line down here into western Oregon, and, of course, they would have come down right where the Natron road is at now, at the head of the Willamette Valley. It would have all been transportation in Oregon.

Q. Do you believe, Mr. Hanley, that if this cross-State line had been built 25 years ago and operated since, from Ontario to Coos Bay on tidewater, that the present development in the State of Oregon, and particularly in the Great Plains country east of the Cascade Mountains, would have been much more comparable to the development in the State of Washington (1280) on the north and the development in the State of California on the south than it is to-day?

A. Yes; it would, I am sure. There is no question about that in my mind at all. Speaking about the comparison, in boy days I

was a great friend of Jack Splawn's, and I went up there with him at one time—if Jack had lived in the same country as I did, or if I had lived in the same country as he did, I would have had an even break to go to the Yakima country—went up there to make a trade with Ben Snipe for Snipe's herd of cattle. I thought my other country had a better chance.

Exam. ROGERS. Which line do you think ought to build the cross-State line, Mr. Hanley? Which of the carriers do you think ought to build it?

712 A. Well, I have always been settled on one idea of locating lines. If any railroad adopted my idea, I adopted their location, and, as it stands now, knowing as to the kinship of the Southern Pacific and the Union Pacific and the Hill lines, and all of them, is that the real tonnage line is from Crane to what they call Odell, wherever that point is, but the survey known as the Harriman survey is the right survey. It was made when Harriman was equal as between the two lines and (1281) was looking at it strictly from a transportation heavy tonnage moving standpoint.

I think the Union Pacific, the Harriman system should build this line. That is, I don't believe in saying a fellow has to do anything, because I don't like to say it that way to him, but the way to say it to him is that the transfer of the Central Pacific is wrong if it makes that change.

I know the status of the right of way of the original survey across the State. It is fine, it is great, and the physical conditions of the country couldn't be bettered. The ideal road for the big tonnage to move on is to stand on this 2,100-foot level, anyhow, north and south, east and west. The climatic condition makes it specially favorable for trackage, and makes it specially favorable for all the reasons of transportation, for moving heavy tonnage.

Exam. ROGERS. When the original survey went across there, did the carriers acquire the right of way, or just make the survey?

A. Well, after they got up to Crane—it is all right of way. (1282.) There ain't no controversy about right of way. The whole country was right of way. The only place where they
713 have any trouble about rights of way is in the canyons.

Q. (By Mr. MCCULLOCH.) Mr. Hanley, just one more question, please. You mentioned a conversation in which some Union Pacific official—I don't remember which one it was—said that it took all the money the Union Pacific could raise to build lines in competitive territory.

Exam. ROGERS. Did your question say that the Union Pacific man said that? I understood that it was the Southern Pacific man.

Mr. MCCULLOCH. Well, now, I want to be sure. Who did tell you that?

A. Well, Mr. Kruttschnitt said that, which at that time I think that he was really of an equal position with both roads.

Q. Yes. Do you know or have in mind what lines he was referring to when he said "building lines in competitive territory"?

A. Well, the Oregon-Washington Railroad & Navigation, Short Line, or any of the lines. One idea with the country was that (1283) it was in a bottle. As I used to tell Mr. Cotton, when he kind of thought that I was stirring too much fuss, was that the fellow that was in the bottle, he had a surer right to work out the cork—he didn't have much of anything else to do.

Q. (By Mr. McCULLOCH.) Mr. Hanley, what do you think of the relative merits of the transportation policy on the part of the Union Pacific system lines of taking the funds necessary to extend their lines into Yakima and the Yakima Valley, in the State of Washington, already served by the Northern Pacific, to build a very expensive line up the Deschutes Canyon in competition with the northern lines to reach Bend, and to expend large sums of money to extend their lines from Portland to Puget Sound,
714 already served by two railroads, on the one hand, as compared with the policy of using their funds for the purpose of constructing such lines (1284) as we are asking for now to develop the resources of territory that had no rail transportation facilities already existing?

Mr. SPENCER. Now, I object to that question, or any discussion or testimony with respect to it, as not within the issues of this case, not responsive to any question submitted to the commission, by the pleadings, or within the scope of the pleadings in the case, entirely irrelevant and foreign to the inquiry.

Comr. MCMANAMY. Objection sustained.

Cross-examination:

The old line across the State as was surveyed, extended from Eugene, practically, there near Natron, across to Ontario. That is the Natron Road.

Q. Yes; called the Oregon Eastern.

A. Well, the Oregon Eastern, wasn't that the Yaquina Road? Wasn't that the Oregon Eastern?

Q. No; that was the Corvallis & Eastern, wasn't it? The Corvallis & Eastern was the old Hogg Road that went through the Santiam Pass, the Hogg Pass, wasn't it?

A. Yes.

Mr. DEY. Well, the precedessor of the Corvallis & Eastern was the Oregon Pacific, I think, what you have in mind? (1285.)

A. The Oregon Pacific? The road out of Eugene always has been known as the Natron cut-off. The Natron cut-off is a
715 convenience south, and the cut-off east. It was always a cut-off east.

The Oregon Eastern line was the company that was organized during the time of joint operation of the Union Pacific and the Southern Pacific, and was organized to build from Natron, near

Eugene, across the State to Ontario, and when it was organized along in 1900 the line to Vale had been constructed.

And that line across the State was the main line, and there was to be a branch from it down through to Klamath Falls, and another branch up into the Deschutes. That was before the Deschutes Railroad was constructed.

And the construction north from Klamath Falls, and south from Natron and west from Vale all started before they started on the Deschutes line. After the Deschutes controversy came on I had this (1286) conference with Mr. Hill.

Q. And organized this Boise Valley, or some railroad over there, and preempted the Malheur Canyon or part of the right of way through there?

A. Mr. Hill never got interested in us until after we got our show a'going.

Q. Well, as I understood you in your direct, you had the Deschutes construction ahead of this cross-State line, but the Deschutes construction didn't start until 1911, in there, did it? 1910 or '11? And the cross-State line was surveyed and construction started along in 1908 or 1909, in there, wasn't it?

A. Oh, yes; it had been surveyed, and then been renewed on this Government application. I think when we got the right of way up there that it hadn't been renewed; it had kind of lapsed, just taken for granted.

716 Comr. McMANAMY. Now, these dates are important. Didn't the Deschutes controversy, as Mr. Spencer termed it, begin along about 1907 and '08?

A. Commenced right at the time that (1287) we asked for that enabling act to get that referendum; that is, the next season after it commenced.

Q. (By Mr. SPENCER.) I think I can clear up that historical matter on that. In the interest of accuracy I think everyone will admit that the Deschutes was later than the cross-State line. The cross-State line was started before the Deschutes.

A. I know when the Natron cut-off was started and went up the Oakridge that we rested several years in the hopes that that would go on, but—now, when this cross-State line was under construction, the Union Pacific, in connection with the Southern Pacific, had access to all these railroads in western Oregon. (1288.)

Q. (By Mr. SPENCER.) Mr. Hanley, in your direct testimony you stated that on the first occasion of your going over into the eastern Oregon country with your father, as you got to the summit of the Cascades he made the comment to you that the timber would assure the transportation if you located in a big way on east, or words to that effect?

A. Yes.

Q. The thought being that the products of these forests would move on that line?

A. Yes; move east and west.

Q. Now I believe you stated when the line was located across the State from Ontario to Eugene it had access to all this trackage in the forests of western Oregon?

A. Yes.

717 Q. And that the first thought that occurred to you and to your father was if this plan could have been carried out, a reality, in other words, the timber could have gone across that line; is that right?

A. Yes, sir.

When the Southern Pacific and the Union Pacific were dissolved this line was cut-off same 15 or 20 miles, this (1289) survey, 15 or 20 miles west of Crescent Lake at Odell. There is no timber to speak of that that line could reach.

It is a fact that if the line is built the timber tonnage in western Oregon has got to support it to a large extent.

Q. Now how is the Union Pacific going to build and operate that line if it can't get that timber?

A. Well, when I say the Union Pacific, I feel like I am speaking more in a general term and speaking more under the time it was under the management of Mr. Harriman or Judge Lovett. That is before the separation. And my conclusion is that it was an absolute contract then, and there could not be any separation; there could not be any separation that would change the rights of the agreement; that is, that it had all the tonnage and all the access to all the harbors, especially if it were using Coos Bay harbor, because that was about the nearest due east and west we could get. I think that the money that actually goes into it as the rest of it is built under what I consider the system of (1290) the combination, that the combination rights go clear through on it.

Q. Well, but you have a condition now where the Southern Pacific has built its Cascade line and goes down through California and delivers the lumber at Ogden. Now if that is con-

718 tinued, or even if the Alturas line is built and it is carried to Ogden over that line, there won't be any of this western Oregon timber for the cross-State line, will there?

A. Well, I would feel as a witness in this case that this was an agreement as between carriers and myself for the State of Oregon, and I was no party as to this plan or had no notice that such a transaction was going to happen; that what that transaction was, that the money that was put in on this construction could not be changed with that same tonnage to route it a different way and a different way of taking it into or onto the Union Pacific. The Oregon Short Line and the O.-W. is the natural way for it to go through. It does not reach into these originating rails that the cross-State line is connected with. If that agreement bars this other agreement, it doesn't; but I don't see how it can bar it.

Q. But the Government separated the lines, the parties didn't separate them.

A. Well, I would say that the terms were general. It probably (1291) didn't have in mind specific cases, but it is certainly right that the cross-State line has access to all the tonnage in western Oregon and all the harbor connection; that the Natron cut-off is certainly entitled to the wheelage, or the charge that belongs to it, for constructing that line. It is a wonderful line and it is well built, and it is built for the purpose of that tonnage. But there could be no arrangement against this agreement of this east and west line that would take that originating tonnage and haul it south or send it any other way for the eastbound tonnage, without there was some
719 other reason besides the reason of an agreement. The money that was put in in the original idea that went with Oregon, was put in with that understanding.

Q. Well, you will affirm the proposition that if it is built and is to be sustained, this western Oregon tonnage that moves east would have to be routed that way over the cross-State line; is that right?

A. Well, I don't like the "if" in the question. It will be built and it will have access to that tonnage. Of course I am speaking more now in general terms, that there is nothing between railroad people and railroad agreements but what it is between men, and if there was something that needed specific attention, that is that didn't bar the other agreement, it can be remedied yet and these men can talk it over and remedy it. By "these men" I mean the two carriers (1292) or any other carrier. Now Mr. Hill made it plain that he had a trackage right under whatever way that railroads agree—I don't know anything about that agreement—down the Malheur Canyon, and his notion was that the matter of wheelage between railroads, even if they were enemies there never could be anything so bitter between them but that common wheelage was a right that they should always agree upon.

Comr. McManamy. Mr. Spencer, in view of your question to this witness and the statement previously made, are you in position to say, or would you care to say, to what, if any, extent the attitude of the Union Pacific would be changed if the western terminus were, say, at Coos Bay instead of Crescent Lake?

Mr. Spencer. Well, I could not say what the attitude of the Union Pacific is going to be, but the cross-State line was located there
720 and cut in two, and it was located to obtain the traffic from western Oregon to which it had access, and the mills in western Oregon are located on all these lines, many of these branch lines, the Springfield branch and the Tillamook branch and the Coos Bay branch, and of course there is the general production in the perishables. Now that tonnage is now originating with the Southern Pacific, and it is natural, and it will, as we assume, be contended for for the long haul. That has been our experience through the Port-

land (1293) gateway. And I am sure there is not anything that we can do, or be expected to do, to get it.

Comr. McMANAMY. You appreciate the fact that I don't want you to make any statement that you don't feel you should make.

Mr. SPENCER. Well, I haven't any authority, of course, to make any statement, and I don't know—but irrespective of that I can't see how a cross-State line could get into the places of production and get this traffic, and I don't see where the situation would be benefited very much by going over to Coos Bay. We would have a great interest charge to pay, and there is only about 2,000 cars of traffic originating over there, according to the record in this case. It all goes out by water.

Exam. ROGERS. Where do you think you would have to go, Mr. Spencer?

Mr. SPENCER. Well, I don't know. The condition is obvious here it would be unseemly for me to get in here and say what we might accomplish by going in there and coveting any of their traffic or their business. I don't see how we can get it, and I would not have any authority, as I say, to enter into a major proposition or discussion of that kind.

Comr. McMANAMY. I don't want to invite you to enter into a discussion if it is something you feel should not be done.

721 Mr. SPENCER. No. (1294.)

Mr. DEARMOND. I understand you to say that the Hill lines acquired a right of way up or down the Malheur Canyon?

A. Yes. They were got for Mr. Hill. That right of way was transferred to the Union Pacific.

Mr. DEARMOND. I wonder if there were any reservations as to common user over that road in that transfer, do you know?

A. Why, I know that Mr. Hill's statement was, what rights he wanted he had reserved them, he had what rights he wanted, and the other statement was that Judge Lovett will build your road, that he had protected me.

Redirect examination:

Q. (By Mr. McCULLOCH.) Mr. Hanley, prior to the dissolution of the Union Pacific system and the Southern Pacific that formerly under Mr. Harriman were operated under one control, it was the idea and intention that this cross-State line would be built by the so-called Harriman lines at that time?

A. The Harriman lines, yes, which included what are now the Union Pacific system lines and what are now also the Southern Pacific lines. (1295.) When I speak of it I speak of it as consolidated.

Q. Now you were asked some questions as to what carriers you thought ought to build this cross-State line. Irrespective of the dissolution or the merging of these two lines, would your views still

be the same, that if what constituted now the Union Pacific system lines and the Southern Pacific lines when they were in one system were going to build the line, that equally at the present time those same lines, namely, the Union Pacific system lines and the
722 Southern Pacific lines might fairly be required jointly to build the line across the State? Or do you get my question?

A. Yes; I get the question. I don't think there is any question about that, excepting that when it comes to questions that come down into their own affairs, that is a matter that when they accomplish what is asked for, what is expected, that the public should meet what you would call the public's convenience, why that would settle that as amongst themselves.

Q. What I was getting at is this, Mr. Hanley: That if the line is required to be built now, and if the Southern Pacific and the Union Pacific system should be required to build this cross-State line, the lines that would be required to build it would be the same lines that originally intended before the merger to build it?

A. It is still a joint question on a separated plan. It is still a joint question, sure. (1296.)

Recross-examination:

Q. (By Mr. Dey.) When that line was projected across the State it was intended to feed the Oregon Short Line and the Union Pacific was it not, with traffic from western Oregon?

A. Eastbound freight, yes. The Southern Pacific would participate as far as the summit of the Cascades; that is, they would get what would be south. The Southern Pacific would move over Southern Pacific mileage, the Southern Pacific and Central Pacific mileage as far as Crescent Lake, on what is now a main line of the Southern Pacific and Central Pacific between Portland and San Francisco. That was the original line—the idea projected.

Q. Once that traffic left Cascade summit, starting east toward your territory, it would not thereafter reach any Southern
723 Pacific rails, would it?

A. No; no.

Q. Now you mentioned several different names in your direct testimony, among them Mr. Cotton, for instance. You know that Mr. Cotton never had any official connection with the Southern Pacific Company, don't you? He was the counsel here of (1297) the Oregon-Washington Railroad & Navigation Company, wasn't he?

A. Well, Mr. Cotton was really Mr. Harriman's adviser. That is, I would say I would tie it to the time that he was appointed, or to be appointed, on the supreme bench, and I was in common conversation—I don't think it is divulging any confidence to say that Mr. Harriman was the reason that he didn't accept it. It was first he could not afford it, and second that he was very fond of Mr. Harriman and Mr. Harriman, he didn't feel like leaving him. I don't contend that Mr. Cotton ever held any official position with the

Southern Pacific. Mr. J. D. Farrell never held an official position with the Southern Pacific Company. He was always an O.-W. R. & N. Company man. He had the presidency in Portland here, after the dissolution of the Harriman system.

Q. And you speak of Mr. Kruttschnitt in the period when the Harriman system was in existence and he was in charge of maintenance of operation of the entire system?

A. Yes; when it was consolidated. (1298.)

Q. You say that this right of way in Malheur Canyon was conveyed to the Union Pacific; you mean to the O.-W. R. & N., do you not?

A. Well, I would not be specific as to what the records were, only as to the conversation with Mr. Hill, that he had turned it over to Judge Lovett.

724 FRANK J. NORTON was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct-examination:

I reside at Sutherlin, Oregon. I have lived there 20 years. I am engaged in the fruit growing and canning business. Sutherlin is located 185 miles south of Portland on the Southern Pacific in the Umpqua Valley. (1299.) The canneries in which I am interested are located at Sutherlin, Oregon, and Roseburg, Oregon. I operate in the name of Frank J. Norton Company. I am president of the company. I have been engaged in the operation of canneries at Roseburg and Sutherlin about 15 years.

When we first started in the growing business we gradually drifted into the canning business and we started with a business of about five cars a year; now we pack between 125 and 150 cars. We also ship fresh prunes and some fresh fruit. In my figure of 150 cars I include both the Sutherlin and Roseburg plants.

As to the kind of fruits we can mostly: We start in the spring and we can some cauliflower, pack some in brine, and start with loganberries, cherries, follow (1300) with blackberries, pears, fresh prunes, apples, fresh beans, tomatoes. Broccoli, apples, pears, and fresh prunes are produced in large quantities in the Umpqua Valley. The climatic conditions of the Umpqua Valley are extremely favorable for the growing of fruits and vegetables.

In addition to the fruits that are canned, we produce very heavy in dried fruits. Douglas County, or the Umpqua Valley produces about 20 per cent of the entire production of the Northwest in dried prunes—has the past couple of years. Mostly Italian prunes are produced. Those are also shipped fresh. We have shipped for several years fresh when the conditions are right.

725 The conditions desirable to ship prunes fresh or green would be an early growing period which would bring us in at the same time as the Milton-Freewater districts, and also a dry summer.

A dry summer makes it desirable (1301) to ship on account of the keeping quality and the time in transit.

The market on dry prunes is in very bad shape this year. With a practically 10 to 15 per cent crop in the Northwest, there is no buying price at the present time. Crop conditions in California have made a very low price, and even with a low price and the low crop conditions in the Northwest, there are no prices out at the present time. The price for canned prunes is very much better than the dried-prune prices. That makes it desirable to engage to a greater extent in the shipping of fresh prunes. If it can be encouraged it should be, because the market on dried prunes is getting less each year. The domestic consumption is going down.

As to our problems with respect to the handling and shipping of fresh prunes at the present time, it is the carrying quality of the western Oregon prune. The western Oregon prune will not carry as good as the eastern Oregon prune. The only outlet to market at the present time is the (1302) Southern Pacific either by the Portland gateway or Roseville. The principal market for the green or fresh prune is Kansas, Nebraska, Iowa, Illinois. We ship them now via the Portland gateway. Most of them go via Roseville. On an average it takes 10 to 14 days in transit to one of our principal Middle West destinations. That will take you practically into the Missouri River points. Sometimes the fresh prunes stand that length of haul without injury or deterioration. Sometimes we have trouble. It depends on our season.

726 A shorter route would be of value in cutting down the time of transportation. The last two days on the transportation is when the damage is done. These prunes move under ice. (1303.) The cutting down of two days time would benefit the green or fresh prune industry in my section of the State as it would enable our prunes to get to the market in better shape.

Q. Do you feel you are actually hampered and prevented from marketing prunes in this manner in any substantial degree because of lack of direct routes?

A. Well, we don't know that it is because of direct routes but it is because of time of transportation. If we had a direct route we would cut down the transportation time. That would let the industry live, because it would take that many prunes off the dried market, which needs it badly. The shipment of fresh prunes would increase as long as the price of dried fruit is low. Our fresh prunes come in competition with Walla Walla and Freewater. Those producing points are two or three days further east.

As to what extent the shipment of canned goods, canned fruits and vegetables (1304) are affected by the length of haul—every day you can cut down the transportation you save interest on drafts. We have out sometimes $100,000 in drafts. Every day we cut off we save that much interest. The shortening of the route would allow us to get into points competitive in time. Jobbers now are buying

more frequently; they buy smaller cars, greater assortments. Any point they can make with faster delivery has added advantage.

At the present time jobbers do not carry heavy stocks of canned goods. The lightest ever known are the present stocks of
727 jobbers. They depend entirely upon direct shipment from producing sections to meet their demands. That is an important factor governing the disposition of our product. It also adds to our financial burden in carrying these goods.

In my opinion the construction of the cross-State line proposed in this case would be of material benefit to our section of the State. (1305.) Any direct line would save us in time and save us in transportation; also in our interest rates. There are no other important advantages that would accrue from the construction of the line unless we would have competitive service. We might induce the building line to go straight through, come to the coast. I mean if once constructed to Odell or Crescent we might induce them to build on to the Pacific coast. I think there are available and practical routes. There are such routes that would provide an outlet through the Umpqua Valley to the coast. There was a survey made. If such a route should ultimately be adopted and constructed, that would produce a still shorter route to our eastern markets. It would be shorter than via Eugene and Odell.

There are extensive areas in our valley at the present (1306) time that are not being, at least as fully as they might be, utilized if adequate markets were made available by more direct routes. Not only that, but the country has depreciated in the last 10 years. Orchards that were set out have been withdrawn by being removed from the land; and that is also becoming true now in prunes. Unless we get a different condition in the next few years there is a large number of acres of prunes going to be removed. I don't know how much of that is affected by transportation facilities, but, of course it is by markets. Markets are absolutely affected by transportation.

728 Cross-examination:

I can't tell you off hand how many cars of canned goods I shipped in 1927. Right around 100, Mr. Dey. (1307.) They went all over the United States. A few were shipped to Portland. Part of those moved out by boat. I think we shipped two cars by Portland gateway which went into Sioux Falls, South Dakota, by request of the shipper to ship on northern lines. I ship some to Portland and then from Portland by boat to New York City and all eastern coast. I would say about 10 cars out of the 100. In reaching Portland part of the time we use auto trucks. It is cheaper. Fifty per cent of the traffic that went to Portland from our plants went by auto truck.

Practically all of the 100 cars would go through Ogden. I think we only had one car that went to Texas, on account of cold weather we sent it clear down to Tucumcari to miss the cold weather (1308) going over the mountains.

Last year we shipped 21 cars of fresh fruit, mostly fresh prunes. They went all over the Middle West. About half of them moved through Ogden and half of them the Portland gateway. When I say through Ogden I mean via Roseville and over the Southern Pacific. When they go through the northern gateway, the Portland gateway, they strike the main line at Granger and would not go through Ogden. On those 21 cars we were able to compete with the eastern Oregon prune.

Q. It is generally recognized, is it not, that the western Oregon prune is not as good a shipper as the prunes from Freewater and over in the country? (1309.)

A. That is the opinion, but your biggest point there is the three days which they have the advantage of us.

Our traffic this last year or so has not been taken over the
729 Cascade line. They move by local freight. We only have one train a day. We have one local freight each way a day. That is taken down over the Siskiyous.

We are north of Roseburg. I have read of the so-called Alturas route, that is being built, in the paper. The Alturas line would be of benefit to us. It would save a trip over the mountains. It would save a trip over the Sierra Mountains in California. We would have better grades and a better distance, and it would fulfill to an extent, at any rate, the idea we are expressing here, if you build it. (1310.)

A few of the fresh prunes shipped through the Portland gateway, went into territory reached by the Great Northern or Northern Pacific. Of the 10 or 11 cars of fresh prunes that moved through the Portland gateway I would say all but three cars went over the Union Pacific.

We route our own shipments, unless the buyer specifically asks for a certain routing to favor some railroad that his plant is on their road. We control all the shipments. As to why we send most of our shipments via Roseville instead of via Portland, it is because the Southern Pacific has made us so many promises of what they are going to do in regard to freight rates, we have been catering to them to give them the shipments so they (1311) could not say we short-hauled them. But they have not lived up to their promises.

730 H. L. EMERSON was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct examination:

I live in Los Angeles, California. At the present time I am employed by the General Petroleum Corporation. I am a mining engineer by profession. I have been engaged in mining engineering since 1896. I am familiar with the Alkali Lake in Lake County, Oregon. I am the engineer in charge of the construction and development of that property, the last work that has been done on the lake.

Alkali Lake is one of the most interesting places, not only (1312) in Oregon but on the face of this globe. It is a natural deposit of sodium carbonate. There is no deposit anywhere in the world that can compare with it in size or in purity of product. It lies about 65 miles in a northerly direction from Lakeview and about 130 miles in a southeasterly direction from Bend. It lays in the lowest part of the great sandy desert in east central Oregon. This depression of Alkali Lake is the immediate drainage point of a basin some 10 or 12 miles long and some 5 or 6 miles wide. It is a very interesting thing geologically, for all of the marks of geological periods are so plainly written there that any geologist can readily read the story.

In the early Paleozoic era this was a great, vast inland sea, and on the uplift of the Sierra Nevadas it became broken up into seas, and in the Tertiary period or in the Jurassic period it was broken up. In the Tertiary period it became a great desert, more arid and drier than any desert which we have in America to-day.
731 Then came along the Glacial period, during which vast bodies of fresh water were deposited in these low depressions, and later, in the Quaternary period, these depressions were so filled and eroded that they have taken the place and filled up gradually until we have shallow lakes all through eastern Oregon.

This lake is a dried up lake. When you approach it you (1313) look as though you were going to go to a vast body of water, but on getting near to the property there is no water there, except just a little bit around the outskirts of some parts of the edges of the lake, which has come from the nearby springs.

To the east of the lake lies the great mountain called Grays Butte. This great mass of rock sticking up there is of a feldspar nature, and to the south and east is the great Abert scarp, which is recorded in all geological history as being one of the wonders of the world. To the west and south lie rolling hills, but in this immediate territory everything drains into this lake.

Nature has performed marvelous wonders at this lake. No place, as I say, on the face of the globe do we find a product so pure from all foreign matter as we find at Alkali Lake. Take the water under the surface of the lake, or the muds, and analyze them and you find sodium chloride, sodium sulphate, and sodium carbonate. But nature in its vast laboratory at the lake has eliminated and put aside in some way that we don't know in our laboratories, we don't know how it is done, but the chloride and the sulphate are entirely eliminated, so that what we have over in Alkali Lake is a pure sodium carbonate, so pure that it is ready for the market. It is not a deposit like any of the deposits in California, or any of the
732 properties owned and operated by the (1314) American soda trust. There they have tremendous sums of money invested in chemical plants to tear down the sodium elements into its different parts to get the sodium carbonate. But here nature has done

it for us, and all we have to do is to work out a mechanical process, not a chemical process whatever.

In the working of nature the waters which have seeped through the clays and muds, and the impermeable muds beneath come to the surface and there crystalize, and as these crystals grow they grow together in bodies and press down on the mud and outward, so that these crystals cover vast area and to quite a considerable depth, pushing out and pushing up the mud, so that these crystals form in great pools, almost adjoining each other, only being separated by the little rim of mud which is pushed up by this work and by this process of nature. The mud is covered with a white powdery substance, as well as the whole body of the lake. The real body of the lake covers about 5,500 acres, all of which is held in fee under patent by the United States Government, and are owned by the American Soda Products Company.

The white mass or powder which covers the lake is the anhydrous soda. That is, the water has been evaporated and this white snowy mass covers the whole lake, so that it has (1315) the appearance of a great body of water at a distance. These pools of pure crystals of soda are exactly the same crystal that anyone would go to the store to-day and buy in the shape of sal soda or sodium bicarbonate. It is a product which you will find on sale anywhere. The only thing that we have over there is a little dust and dirt that has been blown in by the desert sands. We take these big pools which are crystalized, and which we have termed pot holes, and we dig
733 out the sal soda from those pot holes, put them into tanks, reduce it back to a liquor, the dirt quickly and easily settles at the bottom, the liquor is evaporated, and we have the soda ash of commerce.

Soda ash is used in practically every industrial art to-day. Its big usage is in laundry work and soap works, in paint manufacture; in the great oil industries tremendous amounts of it are used, and it is generally used in all of the commercial arts. There is no question about the purity of the product; there is absolutely no question about the supply. As long as nature lasts, as long as these great hills stand thereabouts, and as long as the feldspar hydrolyzes by the action of the rains, and the winds, and the suns, just so long will there be an inexhaustible supply of soda.

Now, sodium feldspar is broken down by hydrolysis. The formation, of course, is sodium hydroxide and hydrogen, aluminum (1316) silicate. The caustic sodium takes up the dioxide in the atmosphere and we have the sodium carbonate. When we take out the crystals of these pot holes or pools, the water immediately seeps in from below and begins to recrystalize. We have taken a count of some of these pot holes and averaged them up. We took an average count in one field of pot holes of 10,000 pot holes, figured them up, averaged their width and depth, and estimated that there were over 18,800,000 cubic feet of sal soda in those pot holes. And

by taking some of the soda from these pot holes and watching the action of nature for the next few years, we found that the crystals of soda reappear and refill these pot holes from which we had taken the soda. And in taking this one pot hole field and averag-
734 ing up these 10,000 holes, we estimated very carefully and figured out that in these 10,000 holes there was at least 56,000 tons of pure soda crystals formed each year, and this would continue as long at nature continues. There is no chance of anything happening, because the work has been going on for generations and for centuries. The mountains in the territory nearby is the great vast storehouse, the lake is nature's laboratory, and all we have to do is simply to take this pure product and transport it to cultivation and market it.

We have figured on various methods of transportation. We have figured on pipe lines. We figured in the war that if (1317) the war had lasted a little longer we would probably have constructed a railroad of our own to get the stuff out. But since the war time we have laid down the property and it is just simply setting out there in the desert and nobody is liable to run away with it. So we have not abandoned it. We are constantly figuring on some way to get the stuff out. I have been figuring very carefully since I have been here in Portland this past week on a new method of taking it out some way independently, so that we could get it to some sort of transportation, so that we could get it into the market. We have the market; there is an inexhaustible supply; its purity is unquestioned; the market is here; and all that has ever handicapped us in our work of development has been transportation. Briefly, that is the story.

This requires no treating at all, except taking the water out of it. When we put this water into the tanks, or these crystals, we have decahydrate of soda, which is $Na_2CO_310H_2O$. That means 10 parts of water to the carbonate of soda. All we have to do is to evaporate that off and we have the soda ash of commerce, or the monohydrate of soda. If you can drive a good bargain it sells from
735 $28.00 to $40.00 a ton. (1318.) I don't think the $28.00 a ton market would be delivered. It might be to some points on the coast. The most of it brings about $30.00 to $35.00 delivered on the coast.

That is a sample of the material I have just been discussing; that is the way it comes in nature. It is pretty well hydrolyzed and dried out. These masses we have here are practically the dust, which is the anhydrate of soda, or the lighter soda of soda ash.

The great properties of this soda in the United States are held by the American soda trust, which is commonly known as the Solvay process. Their headquarters are at Syracuse, New York. There they take the sodium chloride, which is common salt, and through a very careful and extensive chemical process reduce it down and get the bicarbonate of soda, the carbonate of soda, sul-

phate of soda, and the sodium chloride. It is an expensive process, but being controlled by the trust they have been enabled to dictate to the trade. (1319.) There are several points down in California where, during the war time, they took these saline deposits and put in some big plants there. There is one plant where the chemical plant alone cost over $1,000,000. It is the last word in the chemical process in the working out of their sodium products. There they have a trona deposit, from which they have to separate the impurities and bring down the sulphates, the chlorides, and the carbonates and some bicarbonates. But here we have nothing but the carbonate. Nature has done all the work for us, so we only have a mechanical process to go through.

We don't use this carbonate for baking purposes. The bicarbonate of soda is what you use for baking purposes. This is the carbonate of soda, and the bicarbonate of soda is a by-product
736 in the process of elimination of chloride and sulphate. We don't have the bicarbonate; in fact, we would not bother with it, because it is not worth while. We have a pure sodium carbonate, which is a commercial product which is used in all commercial arts. The soda ash is what we have; this is soda ash (indicating sample).

As to whether the product is used by natives of the country here, in its natural state, for baking purposes (1320) I don't know. They may do it. It would not be used generally as a baking soda. But you get the bicarbonate from the carbonate. To get the bicarbonate you would have to go through quite a little process to draw down the bicarbonate from the carbonate.

As to how far from the route of the proposed cross-State line this deposit is, I really don't know just how close the cross road line goes. I am not familiar as to that. All I do know is that we are seeking transportation, and we expect to go out to meet the railroad wherever it comes, or if it comes anywhere near us we will go out and meet it. That is all we have ever asked. We have asked for little help, and we are willing to meet the rest of the work. If the railroad comes within 15 to 20 miles of the deposit we would find means of reaching it. We brought it out by truck in the war time and trucked it over to Lakeview, 65 miles. But it was a pretty hard experience and we could not do that in ordinary times. We have actually operated on the lake and taken out the product and marketed it. (1321.) The only reason we didn't continue to market it was the lack of economical transportation.

As to how many carloads annually I feel we could promise the carriers, we can get out all that can be used. This coast uses up something upwards of 50,000 tons a year. We could supply the coast, and we could ship it east; we could ship it to the
737 Orient. We could draw out 100 tons of material there a day, and it would not be noticeable in the supply, because we have probably right now laying there untouched, ready for handling,

reduced down to the monohydrate, we would have probably 200,000 or 250,000 tons of soda ash now forming at the rate of 55,000 to 56,000 tons a year an average, as I say, from only the 10,000 of these pot holes.

For your information I have some photographs here that I took that might convey to your minds more clearly than what I am trying to tell you, if you would like to look at them. It is pretty hard to explain a matter of this sort. I think the photographs I have here would convey the matter to you very clearly. That is the lake as it looks (exhibiting photograph). There are the pot holes that I speak of. They cover vast areas of the lake. Just turn on another page; there is one where we are digging it out. (1322.)

We don't have any purification plant. All we would have to do would be to have an evaporation plant. It would not be safe to figure on nature as an evaporator over there, because we have a good many winds, the nights are very cold, then we have sudden storms. We would probably evaporate the water from the product over at the lake, because we could not afford to pay freight on water.

Q. Now approximately how many cars per day would you ship out, should you establish a commercial plant there? Have you made any estimates of that?

A. Well, that would depend entirely upon your sales energies, but if we established a plant at all the unit which we figured on building would handle—the first unit would handle and produce 50 tons of soda ash a day.

An estimate of 25 carloads a day for 50 years would be a
738 very small estimate. (1323.)

In connection with the project I have described there would be some inbound tonnage. We would have to take in our supplies for a camp of that sort. We would employ a good many men, of course. (1324.) The mining of this thing would have to be done in a wholesale way. We would have to bring in fuel; then we would have to keep our commissary and stock and mechanical supplies up. As to what kind of fuel would be used, I am at a question right now as to answering that. We have figured on oil, but I have discovered some very valuable coals in Oregon that I think might supersede the oil. I don't know.

As to an estimate of the probable inbound shipments, we would use a barrel of oil to a ton of soda ash, about, approximately speaking.

Q. Are there other products, chemical or mineral products, in the central Oregon territory which you have been discussing, which would be available for the support of a transportation system?

A. I don't know as it would support a transportation system.

Q. I mean that would be available for traffic over the cross-State line that is proposed here.

A. There are some very valuable mineral deposits, and more especially commercial minerals, because I have specialized in com-

mercial minerals the last 15 or 20 years. There are some very valuable commercial minerals, or non-metallic minerals, over in eastern and central Oregon. (1325.) Transportation is the only thing, or has been the only reason for the non-development of those deposits over there in that country. I prefer not to state what these deposits are and where they are, because my work is of a confidential
739 nature right at this time. I know that there are people who are examining and considering the development of other deposits outside of Alkali Lake, over in that neighborhood.

I am familiar with the mountain or butte commonly known as Gloss Butte. As to what that is and whether there is any commodity there that would be of commercial use, I think you probably would find others who are more capable of answering that question than I, because I don't like to reply to a question of that nature unless I have gone into it carefully and accurately myself. I have passed the mountain; I have seen it; in a way I know what it is. It is a tremendous big mountain of obsidian, which is pure silica, of course, in a hardened condition, the result of volcanic eruption, and I think that it will find commercial uses, but I think you will find others who are qualified to testify about that better than I, because I haven't made an exact and minute (1326) and definite examination of the property. I think the most common use of anything of that sort to-day is to use as fillers for cement or asphalt, or plaster purposes. I think more especially is that used—I know in California we used a great deal of those kind of materials for that purpose. I don't know as to what you refer.

In the production of this soda ash we have an advantage over the California product from the standpoint of the cost of production. That is the big thing with that property over here, because it is already purified for us. The fact that we would have to transport this a considerable distance to seaports and markets offsets the difference in our cost of production over the natural product. With the cost of transportation added, we have figured we would still have an advantage over the California products. (1327.)
740 I don't think there can be any question about that. If this product is developed by virtue of transportation, we would then be in such a condition that we could enter the Pacific coast markets and the markets of the Orient in competition, and in favorable competition, with any known source of supply. There is no question but that we would have an advantage over all competitors in the marketing of that product. The conclusion is inevitable that this product would move to market in preferance to the other.

Cross-examination:

I was a witness in the trial of the first so-called cross-State case, with respect to these deposits. I testified the same, I think, there that I have testified here. (1328.)

The American Soda Products Company is the owner of the title to these deposits in Alkali Lake. That is a company organized for

the purpose of taking title to these particular deposits. It does not own any other deposits of any kind, anywhere else. Its stock is owned by California people.

There is no one in the employ of the American Soda Products Company just at this time. I was the engineer in charge, and I have always been very close to the principals, and if any development work was undertaken in any way I would be in charge of it. I am up here now at their expense to represent them and to see about transportation and other things, and in a way, to tell the story of Alkali Lake, simply saying that we are looking for some little help to get our products out.

Q. Where would be the principal market for this product if it were mined and shipped?

A. I am a California man. I can't help but say that in (1329) California we look for everything to come to California. I think that the logical place to handle this property would
741 be San Francisco. If it moved over the cross-State line I presume the major portion of it would move over to the Cascade line at Crescent Lake, and then down the Southern Pacific main line. I am not much on your railroad matter. We might bring it into Portland and take it down by boat. I haven't gone into any of those details. The matter of that end of it is a matter which was never reached, because we are just waiting.

Q. A connection through Lakeview, Oregon, would give you the most direct route, would it not?

A. That is the way we hauled it during the war. To San Francisco I presume it would give us the most direct rail route.

The great body of this material is sal soda now. It hasn't been reduced to soda ash. Sal soda contains 10 parts of water, and soda ash contains (1330) one. Sal soda with the water taken out becomes soda ash. There is no difference in soda ash. Soda ash has one property only. There is a light and a heavy soda ash. As to what the market prices for light soda ash and heavy soda ash are I couldn't tell you definitely, because I am in the legal department at this time, and I haven't paid any particular attention to soda, or the sale or the market price of it. I am not up right now on the cost or the value of soda. The figure I gave of $28.00 is where we go over and buy it ourselves, the oil companies. When we buy soda ash in the market to-day we pay about $28.00 per ton, that is if we are fortunate in getting a fair price. (1331.) That is not delivered to our plant. We go after it, under our contract. We made a long-time contract, and we go after it. We go after it somewhere near 100 miles, I think, that we bring it in; possibly more.

742 When I was making a study of this property I figured upon production cost. As to what it would cost to produce this commodity and put it on the cars at Alkali Lake, I will have to refresh my memory. Those things I haven't gone into for a good many years. I can say that on the present market and under present

methods of manufacture of this commodity, that this deposit affords a basis for successful operation and distribution, because we have made vast improvements in the handling of all minerals and sorts of materials since I made the statements at the last trial. We can handle dirt or sand or gravel cheaper to-day than we could four years ago, so we would mine that much cheaper to-day than when we were figuring on it when I was at the property some 10 years ago. As to what it would cost us to produce this in the form of pure soda ash on the cars at Alkali Lake (1332) to-day, I haven't gone into the figures of it. I can give you my old figures. In 1917, allowing a margin, we figured we could mine it for 85 cents a ton. That is high—allowing everything handled by hand and teams, whereas to-day we wouldn't do anything like that at all. Figuring our gasoline at 45 cents a gallon, we figured that a ton of soda ash would cost us about $4.47. We didn't have any cars there. We just figured it at the plant, that is, after it had been dried, and all that. The oil is figured in on that $4.47. Everything is figured in (1333) including labor and all. As to the price of oil we had to figure pretty high, because we had to truck it in. It cost us $3.00 a barrel when we were doing our temporary work and preliminary work, trucking it in there, but it wouldn't cost us that when we got in operation.

Q. Well, of your $4.47, or whatever it was, how much did
743 you allow for oil?

A. Well, we figured it on the day's estimate. We figured $40.00 to the day. That would handle 850 tons production in a day.

Q. That would be about 20 cents a barrel for oil——

A. No, there is no way to figure oil that way. You don't burn up a barrel of oil to produce a ton of ash. You have got to (1334) take the whole product in its operation. I said, roughly speaking, we would figure, on our way of operating, a barrel of oil to a ton of refined ash.

Q. Well, in your $4.47 you didn't segregate the oil as an element of cost?

A. Segregate it? We added it in. I can't tell you how much we added in for that, because it is estimated in the whole process. I can get all those detail figures for you by sending down south for them. I only brought a general report on the matter.

Q. But your statement that it takes a barrel of oil to produce a ton of soda ash holds good, so that whatever the price of oil is there, why, we can easily find out how much the cost of the oil would be for producing a ton of the soda ash, couldn't we?

A. You can figure it that way if you want to. Then there's a lot of other operations, besides, that oil would be used for, than just simply evaporating the water out—you can figure very easily what it would cost to evaporate the water out of a dehydrator. (1335.)

Q. Now, can't you tell us, Mr. Emerson, when you figure out with exactness that it costs $4.47, I believe you said, to produce

744 a ton of soda ash over at Alkali Lake, how much of that $4.47 is to be paid for oil, oil being one of the principal things that you would use over there, I assume, or the principal thing, in the way of imported commodities?

A. Well, I will say to you, Mr. Dey, for your information that if we started a plant there to-day it wouldn't be anything like the plant we figured on then. With the new process of evaporation which we would employ there would cut it down so perceptibly that we wouldn't use those figures at all.

As to what that production was on the present day basis, I have the figures down south. I didn't bring them with me. I didn't know you would want them. I can send down and get them or send them up to you.

Q. Well, if you have made any such figures, have you any recollection as to the cost of production per ton——

A. I wouldn't make any statement as to the use of figures such as you desire me to state without the figures before me. I know we can produce soda ash over there so cheap with the new way of producing it that we can pay a pretty good freight rate and land it in the market cheaper that anybody in the United States can market it for to-day, and I can take the (1336) by-products of soda and pay an excessive rate clear across the United States and put sodium silicate into the Pennsylvania quartz sands fields, where they make it, and sell it cheaper than they can sell it for in Pennsylvania.

There is no such natural deposit as this anywhere in the world, except in South Central Africa there is one deposit there, and so far to date they have spent $9,000,000 trying to get a railroad into that property and they haven't reached it yet, but it doesn't compare in size and purity with Alkali Lake.

745 Searles Lake is a trona proposition, and nowhere can it be compared with this property. This isn't a trona proposition.

Q. Do you mean to say there is no production of soda ash from natural deposits on the west coast?

A. No, sir, I didn't make any such statement. I said there is no such deposit anywhere in the world that is as pure and as large as this Alkali Lake deposit. There are some impure deposits, but I have told you that they had to go through an intricate chemical process to produce the (1337) sodium carbonate, whereas nature has produced the sodium carbonate at Alkali Lake free and clear from all impurities, and all we have to do is to pass it through a mechanical process which costs nothing compared with the chemical processes employed in the industry to-day.

As to what percentage of the soda ash produced in the United States is produced from deposits, and what percentage by chemical process, there isn't any chemically produced from deposits, all produced chemically. They take it from the deposits. You can't get soda ash without getting it from a deposit. The greatest

property in the United States is at Syracuse, New York, where they have the biggest salt mines in the United States, and in Michigan and at Hutchinson, Kansas, but they take the sodium chloride there, and through the chemical process break down the soda ash. At Searles Lake and at Keeler they take the water and pass it through an intricate chemical process. The plant at Keeler, the chemical plant alone, cost over $1,000,000, and it passes through that chemical process, and there they produce, after it has gone through that expensive process, they produce what we have right over there in Alkali Lake without spending a nickel (1338) on it.

746 Q. Well, is there a difference between the Solvay process and the process used at these deposits in California?

A. The Solvay process practically controls the patents on the production of sodium carbonate throughout the United States. The soda trust is the Solvay process, the Solvay patents, and that is what you have got at Keeler, that is what you have got at Searles Lake. It is the only process that you can work. They are all using the Solvay process. We do not have to do that; nature has done all that work for us. We use only a mechanical process for putting this deposit on the market as soda ash; we don't have to have any chemical process in the work at all. We just dry the water out of it and box it up.

Q. (By Mr. SPENCER.) Now, Mr. Emerson, how big a package will you put this in? Will you put it in bulk or in sacks, or barrels, or in boxes? How do you pack it?

A. Well, it will depend a good deal on the freight rate we should get from the railroad company how we would have to handle it. We could ship it any way. (1339.) It is ordinarily shipped in sacks and barrels. It could be shipped to San Francisco. We can ship it anywhere; ship it to China from here. It is dense, quite heavy. We will probably put it in 100-pound sacks, if we use sacks, or probably 125 pounds to the sack. If we use barrels, we will use a like proportion. For 100 pounds I think the sack would be a little larger than a cement sack. It is a very easy matter to arrive it. You can go down here to wholesale houses and buy it. You can get that information quicker from them than you can from me.

I said that the plant that we figured on, the initial plant that we figured on, would produce 50 tons of soda ash a day.

Q. And you take 50 barrels of oil to produce that 50 tons! (1340.)

747 A. You are all wrong. No, sir; I din't say it would take a barrel of oil to produce a ton of soda ash. I said we figured on that to figure on the outside. All our figures are figured on the outside, and in the new process which we contemplate now we wouldn't use one-half of that. When I testified before I testified about the same way. That is some time ago.

Q. And you testified that you planned putting up this commodity and shipping it back to Pennsylvania and New York and undersell the big producers there?

A. I don't think I so testified. I didn't intend to say that. I don't intend to say it now. Why should I? You are getting me wrong. I say we could take some of the by-products of this soda ash and make a silicate of soda, because we have got the greatest deposits of soluble soda lying right out here in Oregon that is to be found in the world to-day; that is soluble at 212 degrees, while the (1341) Pennsylvania quartz sands require tremendous temperature for 72 hours, and 38 per cent absorption, whereas right out there you can make it 75 per cent absorption in one hour at 212 degrees with this soda ash and ship it east and make it so cheaply and so quickly and so simply that you can pay the excessive rate straight through to Pennsylvania and put it into the Pennsylvania quartz sands fields and undersell them on silicate of soda.

The American soda trust controls the markets of the country in this product to-day pretty generally. They know the advantage of this deposit over here, their engineers have examined it carefully and thoroughly. They didn't spend $1,000,000 on a plant down in California. Other people spent it, and pay them a royalty on their project.

Q. Well, these other people threw away that $1,000,000,
748 when they could have taken a fraction of it and gone right up there in Alkali Lake and produced the same commodity; is that right?

A. They couldn't go up in Alkali Lake. We own it. We are not going to let anybody go up and take our stuff away from us. (1342.) I don't think I would let them in on a fair basis of that million, because nobody would consider it, the Solvay people, or nobody else. Dr. Eyde, of Norway, was out here during the war, or before the war time, and figured on putting a nitrate plant out there, but railway transportation killed it. He was willing to do it. He was willing to put in millions and upwards out there to handle that property. No question about getting money to handle that property if we could have good transportation out.

Q. Now, you can move it all right when you get that wonderful highway from San Francisco to Yellowstone Park, can't you, that comes up through Lakeview, it will go right near this deposit, won't it?

A. Well, we don't intend to take baby buggies and push it out by hand. We are looking for railroad transportation. If we can't get it, why, we are willing to let it lie there. We don't propose to develop that in a half-hearted way, and if we can't develop it with railroad help we will never develop it and it will just lay there. We have a proposition of that magnitude that we can't afford to contemplate its use by trucks.

Q. And yet it doesn't sustain or justify its owner in building a 65-mile railroad of light construction to place it (1343) in competition with the other producing manufacturers?

A. My people are not in railroad construction work, and if
749 they would I would just ask you as a railroad man what

chance they would have if they built a railroad of their own to meet another railroad?

I said I knew of some very valuable commercial mineral over there. I made the first examination over there in 1911. I have made an examination of them since. My last work over there was in '22, but I have had engineers up there within the last year, associated with me. It is just as secret now as it was four years ago; it is until we get railroad transportation. I will say this, we import all that is brought into the (1344) United States of that chemical from Germany at the present time. If we can get railroad transportation over there we will produce it ourselves. I am not going to tell you what those minerals are, or anybody else, at this stage of the game. They are not connected with this operation, or essential to its operation at all. Absolutely different. The people are entirely different, separated, and different concerns are seeking to develop it.

Comr. McManamy. In order that we might get some idea as to the cost of producing soda ash at Alkali Lake, would you care to make an estimate of the probable cost under the new process that is the half of the cost you gave before, or third, or would you rather not make any estimate?

A. At this particular time we are running some experiments which I think are going to revolutionize the evaporation work on all of this class of material, and until we have got that finished, why, I can't definitely state the exact cost, but even if we take our
750 old cost at $5.00 a ton, or less, and pay our transportation, and sell it at market value, there is a big margin on it to-day. (1345.) The ordinary tonnage on this per carload, either in barrels or sacks, I think, runs about 25 tons, and from that up to 40 tons. If we produce 50 tons, it will be from one to two cars a day.

Redirect examination:

We attempted to operate this property by using trucks for a distance of 65 miles. It cost us $11.00 a ton to haul it out to Lakeview by truck. We couldn't afford to do it.

The product of Alkali Lake, or a similar product, is used extensively in the refining of oil. That is one reason I stated large quantities of it would move to California. We would move it to Portland, undoubtedly. I don't know much about Coos Bay, as to the handling of it there, but we would handle it to Portland. (1346.) It would be expected to move to some extent directly east. All the middle country, the Middle West country, could be handled with this product.

Recross examination:

Q. (By Mr. Dey.) How much of the soda ash of the United States if made by chemical process applied to common salt, as distinguished from the soda ash that comes out of deposits under chemical process or otherwise?

A. I don't think anybody would be justified in making the answer to that remark without careful and detailed investigation. (1347.)

751 F. L. YOUNG was thereupon called as a witness on behalf of complainants, and, having first been duly sworn, testified as follows:

Direct examination:

My present place of residence is Bandon, Coos County, Oregon. Prior to moving to Bandon I lived in Lake County. From 1909 until 1920 I lived at Alkali Lake. In connection with the Alkali Lake soda deposit I was superintendent in charge of all the work on the ground. I was employed by the American Soda Products Company. I was employed in that capacity for the entire period from 1909 to 1920. From 1909 until 1912 I was in the employ of the Oregon Borax Company, the original holders of the ground. I helped finance the first trip that was made to the ground, to the Lake, in 1902, and was one of the original locaters of the property. (1348.) The property was first discovered in 1902 and the character of the deposit first known.

For quite a period of time the work consisted in the annual assessment work on the property, until such time as we were able to make final proof and secure patent. After it passed into the hands of the American Soda Products Company, a California corporation, they not only carried on the annual assessment work, but lumber was transported and a number of buildings were erected for the housing of the superintendent and for the men and an office and shops, and so forth. The first attempt to prepare the product for market was in 1915. It was, of course, only a crude plant, erected in a simple way out of boiler iron, or boiler plate—I don't know just what they called it—and the product was hauled from the lake bed and put on this flat surface made out of these great plates of iron, and the heat was secured from a furnace underneath, and in that manner

752 we prepared the soda ash for market. That plant was actually operated. (1349.) The product was shipped to San Francisco and disposed of by Mr. Spreckels. I wouldn't know anything about that end. We hauled it by truck to Lakeview and shipped it over the narrow gauge railroad to San Francisco. The first plant was operated some three or four months during the summer of 1915. Operations were discontinued because of the cost of transportation. Evidently the enterprise didn't pay, because of the excessive cost of the transportation of the product to market. The next attempt made to do any development work on the project was in 1917. A plant was then erected and some attempt was made to make a soda ash in another way than that originally followed, but the soda that was shipped that year was most of it shipped in its natural state as sal soda, shipped to San Francisco. (1350.) The plant constructed at that time was a plant similar to those used by the Spreckelses in their work of making sugar. I should say the investment in that plant was in the neighborhood of $50,000.00. This

plant constructed in 1917 was actually operated but not successfully operated, because it didn't seem to meet the requirements of that kind of product. A portion of that $50,000.00 plant on Alkali Lake is still there. Part of it was removed. I presume there are two reasons why the plant was not continued to be operated. The plant wasn't the kind of a plant required for the dehydrating of soda, and, secondly, the shipping of the sal soda wasn't a profitable venture. We were shipping all the time the sal soda that (1351) season hauling it to Lakeview, a distance of 65 miles.

I am not a chemist. I wouldn't be able to say how many tons of the product were produced at the new plant. I wouldn't make any attempt. The total length of time that plants have been
753 operated on Alkali Lake would be perhaps about eight months altogether, take the two seasons. About $253,000.00 approximately has been spent in the development of the lake and in the construction of the plants for the manufacture of the product.

I heard the testimony of the preceding witness as to the conditions surround the lake, the size of the lake, and the quantity of the soda existing there. If I were asked similar questions concerning the matter my testimony would be substantially the same, except that I think he was very conservative. (1352.) I think the tonnage at Alkali Lake is inexhaustible. At the present time it is all available. There is about 18,000,000 tons there.

The plant considered by the American Soda Products Company there, the first unit was to produce 200 tons a day, and Captain Barnison, the president of the American Soda Products Company, offered to guarantee Mr. Moran, of the Nevada-California-Oregon, 100 tons a day to begin with provided it would extend the Nevada-California-Oregon out to the lake.

I am familiar with the location of the proposed cross-State line. (1353.) That would be about 14 miles from the deposit on Alkali Lake. It would be readily accessible from the lake. I am familiar with that portion of the country traversed by the old Harriman survey, as shown on the maps, in evidence here, across the desert. After it enters the timber out by Fremont I have never been over the survey.

Q. In your judgment, would it be practical to make slight variations in the location of that line, so as to bring it closer to Alkali Lake than the survey shown on these maps?

754 A. I think when they build there is one thing they will make which will bring them within five miles of the Lake and save considerable distance in the mileage and a fill two miles in length about 53 feet high.

Q. Are you at the present time financially or otherwise interested in the development of the Lake yourself?

A. I am; yes, sir. I am convinced that it will be developed upon the construction of the cross-State line. (1354.)

I would like to add this one thing, that in 1910 the Solvay Process people had two men at Alkali Lake for some considerable part of the summer, and that I assisted them in all their work on the lake. It was under my direction that the count of the pot holes was made, and so forth, and that those men said to me that it cost them at their plant at Syracuse, New York, $7.50 a ton to put their material where nature had put ours at Alkali Lake, and that for that reason we had that much advantage of them, especially on all the Pacific coast markets.

Cross examination:

There ought to be a part of the plant at Alkali Lake left. Some of it is so heavy I don't believe they could haul it away. The plant that was installed wasn't adapted for dehydrating of that product. It was the same machinery used in the making of sugar, and it wasn't successful in (1355) dehydrating soda.

It was Captain John Barnison, of San Francisco, that offered to guarantee 100 tons a day to the railroad down in Lakeview. I have forgotten the year when that was, but I should say possibly '19 or '20. I myself arranged the meeting between Mr. Moran and Captain Barnison. Captain Barnison is the president—not at the present time, but was for many years, of the General Petroleum Corporation at San Francisco. As to his connection with
735 Alkali Lake, he was the president of the American Soda Products Company, and is the largest owner of stock in the company. He still owns it. He isn't here. The captain is confined to him home all the time now, is incapacitated from business. As to whether they are in a position to make such a guarantee as that at this time or not, I wouldn't be able to answer that question, but the market (1356) ought to absorb more of this material than it did at that time.

R. L. SPANGLER was thereupon called as a witness on behalf of complainants, and, having first been duly sworn, testified as follows:

Direct examination:

I reside at Boise, Idaho. I am director of the bureau of markets of the Idaho State Department of Agriculture, having been director three and one-half years. My principal duties are enforcement of the bonded warehouse law, which is a law which requires all warehousemen doing a public storing business in the State of Idaho to take out a license and give bond. And, also, another duty is the (1357) enforcement of the produce dealers' law, a law which requires the produce dealers to be licensed and bonded in order to do business in the shipping of produce in interstate commerce. In addition to that, I have other duties. I act as administrative assistant to the commissioner of agriculture, and assist him in the administration of all departments. Furthermore, we from time to time make market investigations and are working towards the better marketing of agri-

cultural products in general. That's the main duties of our department, in fact.

756 Prior to becoming associated with the Department of Agriculture of Idaho I was an economist for the University of Idaho extension division. I was county agricultural agent previously, Payette County, Idaho.

I am acquainted with the agricultural conditions in southwestern Idaho. My duties call me to that territory frequently. We make trips over that territory probably on the average of once or twice a month. In the last (1357a) month I have made an average of once a week through those towns.

I have prepared an exhibit for this hearing in cooperation with another member of our department, Mr. M. L. Dean, director of the bureau of finance. The title of that exhibit is "Carloads of agricultural commodities originating in 10 southwestern Idaho counties." That is the exhibit which I have prepared.

(Said statement was thereupon received in evidence, marked "intervener's Exhibit No. 23, Witness Spangler.")

On the first page of this exhibit we have shown the carloads of the various agricultural commodities originating in the 10 southwestern Idaho counties, and have estimated the portion which we believe will move over the proposed railroad. We have enumerated the principal commodities produced in this section. I might enumerate them and show the number of cars loaded of each commodity during the year 1927 (1358), as taken from the railroad records. There was 31 cars of barley. They are shown on the exhibit. I will not read all of them. Totaling that, we have 12,684 carloads of the commodities, distributed as will be seen on page 1, which were shipped out. Now, of this number we estimate that 3,000 or 3,028 would move over the proposed route, and our bases for making

757 those estimates are different with different commodities. In some cases, the first four, we have used one-fourth as probably being a conservative estimate of the movement of the grain crops over that road. Then hay, we have only used one-tenth, for the reason that there is now an embargo against Idaho alfalfa hay, and it can not be shipped only as far as Baker into Oregon. I would qualify that, and state, however, that we can ship it in the form of meal. We have given a figure of one-tenth, or 47 cars, in that instance. There are now two alfalfa meal grinders in southwestern Idaho, one at Wilder, Idaho, and one at Payette.

We have shown one-tenth of the apples to move in that direction, which I think is a very conservative estimate. If (1359) that proposed road is built it will give us an outlet in Sacramento and San Francisco which we do not have at the present time.

We have shown here 104 cars of eggs to move over that proposed route. At the present time, or this past year there were some 56,000 cases shipped to Los Angeles on that—I can't remember the exact figures—in addition, at San Francisco, 6,594 cases—I should have

said, 22,069 cases to Los Angeles—I believe there are about 600 cases to a car, which would bring that up close to 80 or 90 cars already shipped over there, and I think that figure of 1[illegible] cars is certainly a very conservative estimate, because this particular section is in our principal poultry producing portion of the State, and naturally it will move over that most direct route.

Potatoes, we figure that 98 cars would move, which is about a tenth. I know for a fact that there will be that many, and probably as many times more, for the simple reason that our early potatoes are produced first on the Caldwell section, or (1360) in this southwestern Idaho section, and naturally they will move to the most direct point where they can be used, which is logically California. And right at that time or during the month of September, late August and September, Idaho potatoes are in demand from this section, first, because they are more mature than they are from the eastern portion of the State.

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On page 2 there is shown additional carloads which will be available in 1931 from present area in dairy and poultry products, applying the rate of expansion during the last three years to the next three years. I have included eggs, poultry, and butter. During the last three years, for which we have figures, there has been 58 per cent increase or growth in the production of eggs, 50 per cent in the production of poultry, and 26 per cent in the production of butterfat. If we take this percentage and add it to what we would have three years hence we would have 60 more carloads of eggs, 33 cars of poultry, and 45 cars of butter, which would total 138 carloads, in addition to what I have mentioned, which would be available from the development of these two industries within the next three years. (1361.) That does not mean that that is all that is developed that would be available, it means that portion which under the percentages computed in the former table here would move over the proposed route. There would be available 120 carloads of eggs, and 66 poultry, and about 90 of butter. This is simply what we would estimate out of that increase would move over the proposed route.

Now, in the next table, the next portion of the page, is shown the additional carloads available by 1933, bringing into production one-half of the 51,350 acres, or 25,679 acres, on the Black Canyon project, which will be started in the very near future. It is assumed that 20 acres of land on this project will produce one carload of products, as taken from Mr. Madden's figures on the exhibit which he submitted the other day. I think his figures are very conservative. As pointed out by him, the average now in Canyon County is one car to 30 acres. Canyon County has a lot of bottom lands which are not under cultivation. This Black Canyon land is all high land; it lies level, and most of it will be put (1362) under cultivation.

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Payette County ships one car to every nine acres in the county, and the Gem district, which joins this Black Canyon district, ships

one car in 20 acres. The conditions of the Gem district soil and that of the Black Canyon are very similar, and for that reason I have taken that as a basis in figuring the carloads produced on this project after five years. I have used the same proportion of commodities to be produced as we find on page one of the shipments in 1927. My reason for this being that all of these projects adjoin each other, and naturally under the same conditions we will find practically the same products grown—necessarily have to be, because our climate is only adapted to the production of those crops. Totalling that up, it would be 1,283 carloads produced on the 25,679 acres annually. That figure seems very small, but it figures one car to 20 acres.

Then in the second column we have estimated the number of carloads which would move over the proposed route in the first five years, similar to that which he estimates would now move under present conditions, or that which is produced now, making a total of 486 cars of that 1,283, or a little better than a fourth, to move over the new proposed route.

760 In the next column I have shown what would probably move after the project has been put into full production, a total (1363) of 972 cars would move over the proposed route, and those figures certainly are very conservative.

On the last page we have made a summary of carloads of agricultural commodities from the 10 southwestern Idaho counties to move via the proposed railroad.

From the present figures, as shown on the first page, 3,028 carloads from the land now under cultivation; within five years due to natural development of the dairy and poultry industries, 138 cars; and within five years from development of the Black Canyon project to be irrigated, 486 cars; making a total within five years of 3,652 cars. After the five years, when the Black Canyon project will be under full production, will add 486 more cars to that, making a total of 4,138 cars.

Now, the last item, potential traffic from Dry Lake, Mora and Hillcrest, Boise extension, mountain home and Bruneau projects for westbound movement, 8,003 cars. Those projects are—the development of those projects, of course, is somewhat in the distance, don't know when it will come in, but taking Mr. Madden's estimate the other day of one-third of the production on those projects will move over the proposed route, I think his figures are very conservative. After that time the Pacific coast will be considerably more populated than it is now, the consuming power on the Pacific coast, and particularly California cities, will be much greater; it is natural to (1364) suppose they will be able to consume a third of our products in that section, when these projects are in cultivation.

761 My compilation includes nothing for the Owyhee project. There can be no duplication between my compilation and that of Mr. Teutsch. The number of cars shown on the exhibit is the number that I estimate will move annually.

Q. (By Mr. ELLIS.) I notice on page two of the exhibit you have made no allowance for apples, whereas there is some testimony in this record to the effect that apples would be shipped westbound. How do you explain that?

A. I might have stated in figuring on page two, that basis of 1,283 cars, or the percentages, rather, were figured up leaving out apples, and on the first page this total of 12,684 cars shipped out. Well, on the new Black Canyon project, of course, in the first five years, there will be no apples to ship, so we have subtracted 4,909 from 12,684, giving (1365) a total of 7,775 cars, and from that we computed the percentage to figure these various commodities on page two. In other words, taking barley, for example, 31 cars out of 7,774 [sic] would give four tenth of one per cent. That is the basis figured all the way through.

As to whether we have had any success in exterminating the alfalfa weevil, we have come to the point now where it isn't necessary to even spray for alfalfa weevil. In other words, the alfalfa weevil has done no damage in the State of Idaho to our hay crop for four or five years, that is, damage sufficient enough to cause the farmers to spray as a means of control. However, there isn't much chance of ever eradicating the pest. But we have introduced into the State a parasite which has gone a long ways towards controlling it. No doubt the parasite is what is controlling the weevil to-day. (1366.)

762 As to what investigation I have made personally of the San Francisco and northern California markets for our products which would justify me in making the assumptions I have of the movement westbound to those markets, on October 3rd I started to Los Angeles, and worked north, making a market survey and determining the possibilities of our possible outlets for Idaho products. I was agent, or acting as special market representative, of the Idaho Department of Agriculture and the Idaho State Chamber of Commerce, who sent me there for that purpose, and my work there consisted in contacting the trade every day; I was on the markets every day, talked with the various men handling our commodjties, determining and drawing conclusions as to what the demands were for Idaho products, made reports back each week to our people as to what they wanted in the way of certain apple packs and certain ways of packing potatoes, and reported the condition. In other words, after three weeks in Los Angeles I think I understand pretty well what their demands were on that point. Also visited San Diago and worked on north to San Francisco, where I spent another week doing the same thing; visited the other bay cities, and worked on over to Sacramento. (1367.) I found in San Francisco that they didn't use Idaho potatoes to any great extent. To be exact, in 1927 we shipped two carloads of potatoes to San Francisco. I said to those fellows: "What is the matter? Don't you like Idaho potatoes?" "Absolutely, we like them, we like to use them, but we

can't use them under present conditions. If you can get them here to us at a rate at which we could use them we could certainly sell them, and we are sold from Oregon and Washington on the
763 same kind of potatoes," which I think are not as good as our potatoes produced in the drier climate, but at the same time they can be sold at a rate so much under what we could sell them for if we ship them there under present conditions that they are just not used. Taking it from the consumer's standpoint—I also questioned consumers who asked me why we couldn't give them Idaho potatoes; I simply made them the explanation that was given me, that they couldn't be used, when they could be put in there from Oregon and Washington cheaper than we could put them in there. (1368.) The Yakima district in Washington was shipping them in large quantities into San Francisco cheaper than we could. If the cross-State line were constructed it would mean that we would go into northern California with Idaho potatoes. There are enough people there acquainted with the qualities of Idaho potatoes—many of those people have come out here from the East, they know them from back there and would demand them if it was possible to get them in there. There would be no trouble whatever in developing a good market for Idaho potatoes if this proposed route was built.

Now, to move over to Sacramento. Sacramento and the adjacent cities near there do use about 250 carloads of Idaho potatoes each year. They want them, and will use more if this new road is built. It will be logical for the southwestern Idaho and eastern Oregon district to supply that market. It is a short haul. Especially in the haul, when the potatoes are slightly immature, it is absolutely necessary that they be moved to market as quickly as possible. If they are not, there is a certain amount or certain percentage of deterioration of cars, and naturally that cuts down returns to the producer, and the fellow handling them, the dealer. (1369.)

764 The condition as to other products is substantially the same as I found with reference to potatoes. In the case of apples, not very many Idaho apples are used in northern California at the present time. I questioned some dealers at Sacramento as to why they didn't use them. They said, "We can't get them in here at a rate where you can compete—or where we can compete with Idaho stuff against the Oregon and Washington apples." As to what principal advantages we would have in the northern California markets with the cross-State line's construction, as compared with the Los Angeles market, one of the big items is the fact that we could start a carload of produce to northern California—if the market is just not right at San Francisco or Sacramento it could be diverted down the coast to southern California, or before it got to California it could be diverted to Portland or Seattle. The chances are not so great there, however, because Oregon and Washington produce similar commodities. That would not be true in the case of live

stock. It would be a great advantage to livestock producers. That is one reason why a lot of the livestock now goes east, is simply because if they ship to Los Angeles they cannot divert the stock in case the market isn't right. If they could go over the proposed route they would have three principal larger markets to which they would have the choice of going. (1370.) The shortening of time in reaching the market would be of advantage. In the case of perishable commodities and going around the long route it sometimes requires icing two or three times. It was brought out by Mr. Wagner yesterday in shipping his butter he has to ice at several different points before he gets to points in California—or southern California. This would be true, also, of the shipments of potatoes or apples during the fall months, when it is warm.

765 Cross-examination:

Taking the list on Exhibit 23. We don't want to divert any barley en route; probably not corn; no oats; we might want to divert wheat. That is wheat we raise on both dry land and irrigated land. (1371.) Some of it is milling wheat. Some of it is hard. I couldn't give you the actual figures as to how much is soft and how much of it is hard, because I don't have them. We are not shipping a great deal of soft milling wheat into San Francisco right now; or Los Angeles. The large amount of our wheat is milled in Idaho and is shipped to southern points. It goes down to the southeast and some of it is shipped up to Seattle for export flour and some to Portland. San Francisco and Los Angeles are in that business to some extent. (1372.) One concern alone in San Francisco uses a large amount of Idaho wheat for milling purposes. Whether it was eastern Idaho or southwestern Idaho, I couldn't say as to where they got all of it.

Q. Well, were you talking for the whole State, or were you talking for these southwestern counties?

A. Well, in that case I was talking for the whole State. I made the trip for the whole State, but that hasn't anything to do with this exhibit. In making a trip down there for the whole State I was representing a district that was even a larger producing district than the southwestern counties.

Q. East of Minidoka?

A. Yes; and the American falls district.

Q. You don't claim any of that would go via this cross-State (1373) line, do you?

A. No; I am not making that contention at all. But I main-
766 tain this, that my study in that section of the State will give me some idea of the market demands for Idaho products, and if we produce them in this southwestern section they certainly would move over that proposed route.

Q. Now, you were talking about the necessity of the diversion privilege, and you think that it would apply to wheat. Now, where would you stop the wheat en route, and where would you divert it?

A. Well, we would divert it between Portland and San Francisco. That would be the only point there. I don't regard that as so important as some other commodities. We wouldn't divert hay, because the hay that is shipped over that line would probably be shipped for feeding purposes along the line before it gets to any large market. (1374.) We might divert apples very easily, if they can not be used in San Francisco and can be used down south in Los Angeles. As to what it would cost to divert them into the Los Angeles market from the San Francisco market I could not say as to that. I don't know how much it would cost per acre. The same as applies to apples would apply to potatoes.

Q. Now these trimmings are the only excuse you have got for the cross-State line, for the southwestern Idaho counties?

A. Why, no; I would say not. You mean so far as would be my only reasons?

Q. Yes; some of these accessorial services?

A. I should say not. It is a more direct route; it gets us there quicker; it saves icing; it saves expense—any number of things. (1375.)

Mr. SPENCER. At page 137 of Exhibit 16 Mr. Newell says, "I think in the beginning the new line will require only mixed train service of perhaps two cars daily each way. The reduced amount of engine and train crew service required would justify an estimate of 17 cents per car mile, at which rate the service would cost $47,000 per year." Now would any mixed train service across there help you as compared with the present main line service?

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A. Well, if it got there quicker, yes. If you have a carload of apples on that train and it moves direct down there, it is certainly going to be an advantage to going around the other way, which would require a longer time.

Q. Well, why is it that so much of this tonnage, even tonnage that you say does not require diversion in moving to San Francisco even from the territory close to the Rogerson-Wells cut-off, goes around via Ogden and Salt Lake to San Francisco, instead of via the Rogerson-Wells line?

A. Well, there are several reasons. In the first place, the service is inadequate, especially for the shipment of perishable commodities. And another reason is, you have got so many different points you have to transfer. For instance, you go to (1376) Minidoka, you have got to stop there; you move down to Twin Falls and you stop there; you go on down to Wells and stop there, it is transferred again. You have got poor service there. Another reason is, that road was not built to serve this southwestern Idaho territory. As to what appeals the people made up there to get it constructed, I had nothing to do with that. I say it was not built to serve this southwesern Idaho country because of its geographical location. It is illogical to assume that you would ship from Caldwall, Idaho, say, down to Minidoka and back down to Twin Falls and the other way.

768 I haven't the figures showing the equidistant point on the main line of the Oregon Short Line between going via the Crescent Lake line to San Francisco, on the one hand and via the Rogerson-Wells line on the other, to San Francisco. I knew them once, but I (1377) haven't them in my head now.

Q. But that line has been a misfit and a failure and should not have been built? Are you speaking now for the Department of Agriculture of the State of Idaho?

A. Yes, sir: I would not say that the line should not have been built. I would say this: When service is given over that road as is given around the other way, the people of Idaho are going to use it. The tonnage will be tendered if you get the service, of course. But you have got to have the service there for icing before we can ship perishable commodities over that way. We can ice at Twin Falls. I have never been to Wells. I don't know just what they have down there. (1378.)

Q. Now these figures in the last line, as I understand you, are the cars you estimate of these different commodities that will go from the 10 southwestern counties to San Francisco and northern California, and also Los Angeles; is that right?

A. You refer to 3,028?—No, I would not say that. I would say any point along the line after loaded. I haven't attempted to estimate in that 3,028 how much of it is Los Angeles business, but it could very well move direct to Los Angeles by this way. I take 3,028 cars and say we are going to deliver them somewhere along the line, either at San Francisco, or Sacramento, or Portland, or Seattle, or Los Angeles, for the simple reason I have been down in those markets and I know something of the amount of the products produced in southwestern Idaho, that they can use down there and will demand. I was at Los Angeles. I
769 spent longer than 10 days down there. (1379.) I spent nearly three weeks there.

Q. How many cars did you determine then in that study that you were making there were going to Los Angeles? Were you preparing this study then?

A. No.

The cross-State line would be an advantage for Los Angeles business from this southwestern Idaho section; no doubt about it. It would not go clear around the other way.

When you say it is just as short around the Salt Lake way to Los Angeles as it is around the Crescent Lake way, when you refer to Crescent Lake, I don't know as I know just where you mean. I have heard of Crescent Lake. Do you refer to the cut-off between Ogden, or between Salt Lake and Los Angeles?

Q. No; I am talking about your connection up here in the (1380) Cascade Mountains of the cross-State line with the so-called Natron cut-off of the Southern Pacific.

Exam. ROGERS. They have applied the name Crescent Lake to this imaginary connection point between the cross-State line and the present Southern Pacific Natron cut-off.

The WITNESS. I understand now. It is a little shorter to Los Angeles by the Crescent Lake. I have done some figuring along that line. If I remember correctly the division point, the distance is around the eastern point of Elmore County somewhere, in Idaho.

Q. That is, to Los Angeles or to San Francisco?

A. Well, I won't say, because I haven't gone into that deep (1381) enough on the distances. I don't see that that has a great deal of bearing on this data as I have submitted it.

Q. Well, hasn't it? You are not giving us the destination
770 of these commodities of this tonnage that you have imagined and have in the second column of this Exhibit 23, which you say——

A. It is not all imagined, because some of it is already going there. It is not going by the cross-State line. We are going to put it over the cross-State line, if that road is built. You don't need to divert it, if you build a railroad. Now most of it goes around by Ogden and Salt Lake to Los Angeles. (1382.) We are going to divert it from that route and take it over the cross-State line down to Los Angeles from those southwestern counties; but not altogether, I would not. We would do it some because it is a more direct route.

I am not sure the Oregon Short Line is the biggest taxpayer we have in the State. I guess it is. It has spent tens of millions of dollars in our district in the last few years.

Q. And you want to take this business away from it and divert it across the cross-State line and down through on the Southern Pacific to Los Angeles?

A. It would not necessarily take the business away from it. As time goes on that country is going to be more settled. The farms in that section of the country are going to grow more concentrated products; they are going to be of more value. The tonnage will increase naturally. (1383.)

If as you say, it is 39 miles shorter by way of Salt Lake to Los Angeles over the Union Pacific unit than via the Southern Pacific, I would not divert this business.

Q. From Ontario, the extreme western shipping point.

A. In that case I would not divert it.

Q. Now you say that you only ship two or three cars of potatoes, I think it was—into San Francisco, and a very small
771 shipment of apples into San Francisco because you meet in competition there apples and potatoes from Oregon and Washington? That was correct, if I understood you?

A. Yes; if we have a cross-State line that condition will not obtain so much so. We may have a differential against us, both in distance and in rate, but it will be more easy to get in that market, if there is a road direct down there.

Q. Now you say, however, that you do ship potatoes, for instance, 250 or 30 cars into Sacramento?

A. Yes.

Q. Did it occur to you that those cars did not get the benefit (1384) of the water rate to the extent that the cars or shipments to San Francisco did, and that is the reason you get into Sacramento?

A. Yes; I know that.

Q. Now what is this last page here, potential traffic? You have got 8,000 cars here of that, from Dry Lake, Mora, Hillcrest, and these other projects. There are none of them constructed yet, are they?

A. No; as far as I know no provision or fund has been made from which their construction is to be now anticipated. I qualified my statement very well, I think, that it may be in the far distant future when those are developed. I said nothing about them being in the very near future.

Q. Now why do you fix five years as the measure for the production of 486 additional carloads? That is the Black Canyon production, isn't it?

A. Yes; if they start as they contemplate doing, the Black Canyon project will be in (1385) partial production in five years. After water is once put on the land these projects grow pretty fast. Four hundred eighty-six or 1,283 carloads is certainly not very much to be produced on 25,000 acres. We assume those 25,000 acres will be under cultivation after five years. They have already started
772 on the works. They have started surveying it long ago. Real construction, the letting of contracts, has not proceeded. The financing has not been arranged. But 486 carloads is not a very big figure. All of pages 2 and 3 of my exhibit are prospective with the exception of 3,000, or what was produced now.

Redirect examination:

Q. (By Mr. ELLIS.) Isn't the Black Canyon Dam, which is to be used in conjunction with this project, already constructed (1386), this Black Canyon project which is discussed in your exhibit, or do you know whether that Black Canyon Dam which has been constructed is to be used in conjunction with the project?

A. Oh, yes; that will be used.

Q. When you admitted that actual construction work had not been begun on the Black Canyon project, you did not mean exactly that, did you?

A. I didn't mean that part of it. I meant laterals and getting ditches into shape. The laterals and the ditches are only a minor part of the entire project.

As to whether construction work in the amount of approximately $1,400,000 has already been completed on the Black Canyon project, I don't remember as to the cost, but the dam has been in operation for several years.

Q. Now with reference to the question of diversion to the Los Angeles markets, assuming that it is 30, or even 50 miles farther to Los Angeles via the cross-State line and San Francisco, wouldn't it be an advantage to you to ship even that additional distance if by doing so your shipment would have available every market throughout the entire Pacific coast (1387) section from
773 northern California to the extreme southern end of California?

A. Yes; it would: It would be an advantage in cases of those commodities for which I thought I might want to select different markets. That would be an advantage. The only instance where there would be an advantage in shipping via Salt Lake would be a commodity which we knew we would sell in Los Angeles and would not want to offer on any of the markets north.

Recross examination:

The Black Canyon Dam is constructed. The dam for the reservoir has not been altogether constructed.

Q. A little diversion dam is constructed up there?

A. The construction now in place certainly will help. (1388.) Nothing has been done on the storage dam at all.

M. L. DEAN was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct examination:

I reside in Boise, Idaho. I am at present director of the bureau of plant industry, Department of Agriculture of the State of Idaho, and am assistant director of markets. I have been engaged in the present position about five years. I have charge of the standardization work in connection (1389) with the growing of crops, grading of them, investigations in connection with the preparation of them for market, and the available markets for them. I have been in the Northwest about 20 years. Before coming to the Northwest I was engaged at Olympia, Washington. Before coming to the Northwest I was in Michigan. I was a farmer, and eight years connected with the agricultural college, about 13 years with college
774 extension work. In the State of Washington I was supervisor of horticulture, department of agriculture for four years. I was two years in the Wenatchee Valley. I assisted in the organization of the Wenatchee District Cooperative Fruit Growers Association and was assistant manager of that. My activities in the positions I have held have led me to make continual study of production of products and the distribution of them in the various markets. (1390.)

In order to perform my official duties I visit the different sections of the State of Idaho very frequently. The purpose of these visits is to watch the condition of the product, study the condition of it with relation to shipping. I am acquainted with the agricultural conditions in southwestern Idaho. I visit that portion of the State sometimes daily and sometimes weekly. There are possibilities in

that territory of increased tonnage in the near future on the land that is under cultivation. That territory has built drainage works, in the Boise Valley especially. There are some built around below Emmett. (1391.) They have been working on some of those drainage works this last year, and they have all been built within the last few years. Those drainage works are principally on the bottom lands, or the floor of the valleys. The purpose is to take off surplus water. The drainage of those lands should cause the lands to yield more production.

Other reasons for an added production in southwestern Idaho on the lands already irrigated are, a general improved condition of agricultural activities and better farming, diversified crops, and the increase of the dairy industry, which naturally improves the production of the soil, improves the fertility of the soil and thereby it is possible of increasing the crops, the production
775 naturally. It will improve varieties of crops, better seed, more attention paid to improved seed, certified seed.

I assisted in the preparation of Exhibit 19. I consider it a fair estimate of what it purports to be. (1392.)

[File endorsement omitted.]

776 PORTLAND, OREGON, *August 10, 1928.*

R. M. Fox was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct examination:

I live at Portland and am treasurer of the Roach Timber Company, a corporation. This corporation owns a tract of timber in the Willamette Valley. This tract, consisting of two and three-quarter billion feet of timber, is located in Douglas County (1394), 14 miles from the town of Sutherlin. This tract is not at present under development and has not been in the past. I am president of the Sutherlin, Coos Bay & Eastern Railway, a corporation organized for the purpose of providing rail facilities to tap that timber tract of the Roach Timber Company. This railway company was organized in 1914 for the purpose of building a railroad from Coos Bay to Boise, Idaho. The company is still in existence as a corporation. As to what work, if any, in the nature of construction that company ever did (1395), eight miles of road were graded. The intention or purpose of that railroad project is to open up the timber on the north Umpqua watershed and on the headwaters of Coos River. The route of that proposed line from Coos Bay east would be as follows: From a point on Coos Bay up the Coos River to the divide coming over on Hubbard Creek, on the Umpqua watershed, down Hubbard Creek to Umpqua River and thence to the Calapooya Creek, and up the Calapooya Creek to the divide of the Cascades, and then due east to connect up at some point which we have not definitely ascertained, with the Union Pacific, to give

us a direct route east. Starting from Marshfield on Coos Bay
777 the general direction of the proposed line would be practically due east.

Q. Now, in crossing that country between Marshfield and a point intersecting the Southern Pacific Natron cut-off running, as you said, due east from Marshfield to such point of connection, would that line tap any extensive timber resources? (1396.)

A. That line would have tributory to it directly—I mean by that with no feeder lines—approximately 50 billion feet of timber.

Q. Is the territory traversed by the route of that proposed line now reached by any existing rail transportation?

A. No.

Q. How is the route of that proposed line with respect to the timber areas you have just mentioned, this 50 billion feet, located with respect to the line of the Southern Pacific from Eugene down to Marshfield?

A. Well, it would not come in contact with it at all, because it goes due west from Eugene and then down the coast, and this would go directly west from a point at Sutherlin. It would not come in contact with it until it got to Coos Bay.

The approximate distance between the route of my company's proposed line and the route of the Southern Pacific's Coos Bay branch as it runs west from Eugene (1397) and before it turns south is approximately 60 miles. It has been the intention of the company of which I am president to connect up its line with the line of the Union Pacific at some point in eastern Oregon. I think the most westerly point of the Union Pacific Lines in eastern Oregon now is Burns; I am not sure—Vale or Burns. There was a road built in from Ontario that we figured we might possibly tap, or go clear through to the Union Pacific. I think that at the
778 time that we had this under contemplation that short road from Ontario into the interior was owned by a different road.

The Public Service Commission of Oregon, in this proceeding, is asking for the construction of a line of railroad from Crane, the present terminus of the Union Pacific's lines extending (1398)
779 west from Ontario with the exception of the Burns branch, from Crane to a point at or near Crescent Lake on the Natron cut-off of the Southern Pacific. This line of railroad proposed to be constructed by the public service commission in this case would form a connecting link subtantially in the line of railroad that my company was incorporated with the idea of building. In the event the line were constructed that the Public Service Commission of Oregon asks to have constructed, the distance to build from Crescent Lake to tidewater along the route that we had mapped out would be about 150 miles. (1399.) The plans of my company for the ultimate construction of the line of railroad it was incorporated to build have not been abandoned. The organization of the Sutherlin, Coos Bay & Eastern Railway, and the purposes of its organization,

were connected with and related to the problem of marketing the standing timber of the Roach Timber Company. It would be almost impossible to estimate the value of the benefits which would accrue, so far as the interests of the Roach Timber Company and of the Sutherlin, Coos Bay & Eastern Railway are concerned, from the construction of a line of railroad from Crane to Crescent Lake (1400), because we have not only all of our timber but other large tracts in there, and it will give us a direct outlet to the east. It is absolutely necessary to have rail transportation to get our lumber to the markets, and that timber in there has all got to go to the Middle States, the interior markets, and it will never be opened up or operated or developed until it does get a direct route east. (1401.)

The timber of the Roach Timber Company is considered a mature tract and should be cut now. It will never be any more. The deterioration to-day is about equal to the growth.

780 By the Middle West I mean the Central States—probably Iowa, Nebraska, Kansas, and Illinois. I would not anticipate the movement of the lumber manufactured from the Roach Lumber Company's timber to the Atlantic seaboard, by carloads, because you couldn't ship that far. You would come in contact with the lumber that is shipped by boat through the canal to the Atlantic coast when you get in about as far as Pittsburgh; that is about as far as you can ship by rail.

The timber of the Roach Timber Co. is about 65 miles from tidewater on the Pacific coast. (1402.) It would be possible to ship lumber manufactured from the timber of the Roach Timber Company to tidewater on the Pacific coast and then transship it by water through the canal to the Atlantic coast but it isn't as profitable as to manufacture it for and ship to the Central States, that market. There are sawmills located at various points on tidewater in the State of Oregon that manufacture fir lumber and ship it by water to the Atlantic coast through the canal. The movement by water from such mills is quite substantial. In my judgment, interior lumber mills of the Willamette Valley may successfully engage in competition with such tidewater mills for business of the Atlantic seaboard markets, but not profitably.

Exam. ROGERS. Mr. Fox, you said a little while ago that some construction by other carriers would be of inestimable value to someone. I didn't understand just what it was. (1403.)

A. Why, I think the question was that it would be—what value it would be to the timber owners which that would tap. There would be several large tracts, to say nothing of innumerable small tracts, that is, people that hold smaller tracts of timber, that it would open up. Our idea was that there was three big tracts

781 that need a railroad; this road possibly would open up those three tracts, without calculating on about 5,000, 3,000 acre holdings in there that would put in small mills, and all that small stuff.

Exam. ROGERS. Did you have in mind that the new construction would connect with your construction?

A. Oh, no; I didn't have any idea about that. We have only got eight miles of it graded. The matter of it to tie up with our construction would be immaterial, as far as that is concerned.

Mr. MCCULLOCH. I think the examiner had in mind, did you not, Mr. Rogers, his proposed construction? That is, your company has a line of railroad projected across here, and I think Examiner Rogers wanted to know if the line of railroad that the public service commission is asking to have constructed across the State would fit in or tie up with the proposed route of your own line over to the Natron cut-off? (1404.)

A. Why, yes; if they come down the way we are talking about it would be identically the same route that we have been figuring on.

Exam. ROGERS. The question I had in mind was whether the witness contemplated the completion of the proposed construction that he has got, or whether he was now expecting some other carrier to do what he started out to do?

782 A. We have always had in mind to complete that construction some day. We are not railroad builders, and if that road could be built by some other road, naturally that is what we would want. In other words, it is only contemplated as a necessity if we operate that tract, that is all.

Cross-examination:

All of the timber holdings in which the company, which I represent, is interested are located east of Sutherlin. (1405.)

The termini, as stated in its articles of incorporation, were Marshfield or some other point on Coos Bay, on the west, and Boise, Idaho, on the Oregon Short Line, on the east. We wanted to build the road from Coos Bay to some point where we would meet with the Union Pacific, which we hadn't definitely determined. In order to get some operation on our tract to start with, we built from the Southern Pacific at Sutherlin east to the timber. In considering the Coos Bay territory, we had in mind reaching tidewater; (1406) also two other tracts of timber, not owned by us, on the headwaters of the Coos River, between Sutherlin and Coos Bay. We have built just eight miles of the fourteen from the Southern Pacific main line at or near Sutherlin to our timber tract. There is no track material on it. It was graded in the latter part of 1914 and 1915. The cessation in the progress of the work was caused by war conditions. A good deal of emphasis should be laid upon a through route to the east for our lumber products when they are milled, and in that connection I know of the Southern Pacific's new development from its Cascade line near Klamath Falls through Alturas to the Cen-

783 tral Pacific in Nevada. I do not know the difference in mileage between that route and this route that is proposed.

(1407.) Our purpose is to eventually reach the Union Pacific lines for distribution of our product in the Middle West.

Assuming that the Alturas Line is only 215 miles longer than the proposed cross-State line, and considering that it connects with the Union Pacific at Ogden, that line would not satisfactorily serve our purpose. Our lumber wouldn't travel that way. It would go south to Sacramento, and then on to the Union Pacific over the Southern Pacific route. Whether, upon the completion of the Alturas line, which is now under construction, our lumber would naturally move over that route because it is substantially over 200 miles shorter than the Roseville route, well, I don't know. That would be a matter for the railroad company. If they wanted to take it, it would be a round-about way, I should imagine, to take it that way, to get up to Klamath Falls and then clear around through, as to take it over their main lines to Sacramento and Ogden. The routing of that, of course, would be a matter out of our hands. I don't know what the Southern Pacific might do about it. At the present time, all the lumber that is there is taken south to Sacramento and then Ogden and east. (1408.)

Sutherlin is 17 miles north of Roseburg and is, therefore, 185 miles south of Portland and about 60 miles south of Eugene. So that with the completion of the Alturas cut-off our lumber could move to Eugene over a main line, then over the Cascade line, which is a main line, through Klamath Falls and Alturas to the east.

In building from Sutherlin direct to Coos Bay it is necessary to cross one mountain range, the Coast Range Mountains;
784 and if our proposed line were extended from Sutherlin, or from our timber tract, on the route that we plan, it would necessitate piercing the Cascade Mountains.

I do not know whether the territory through which it would go in the Cascade Mountains is materially different (1409) from the territory through which the Cascade line or Natron cut-off of the Southern Pacific goes, so far as difficulties of construction are concerned; I have never been over that Natron cut-off. So far as we have it laid out, we reach an elevation of 3,753 feet on our proposed route from our timber east. That is not over the top of the Cascades. A tunnel is not contemplated that is carrying it clear back in there—I can't tell you exactly how far, but clear in back of the headwaters of Steamboat Creek. As to crossing the Cascades at some point, we couldn't definitely determine how much of a tunnel we would have to build, and as to how much grade we wanted. If we wanted to keep the maximum grade, for instance, two per cent, we would have to build a proposition involving a tunnel. That same condition exists over the Coast Range. We know we can get over the Coast Range by a two per cent grade by building a small tunnel. If we wanted to build a longer tunnel we could make it a one and one-half per (1410) cent grade.

Q. Now, to accomplish your ultimate end, which I understand to be to reach the lumber markets of the Middle West, could you not build east from Sutherlin until you reach the Cascade line of the Southern Pacific, and then follow the Alturas route, on a much more sound economic basis than to attempt to build clear across the State of Oregon to reach the Union Pacific on your own account?

A. I don't know as I could say that, because—that is, an-
785 swer that with any knowledge about it because we have investigated that—that development, you see, in there all came about since we planned a development ourselves, and it is dropped, and we haven't gone through now today and say that it
786 would be cheaper for us not to build any further than that. But at the time we had that under contemplation, and I still think it exists, and that is it would be more economical for us to start east and tap this other road and open up that territory and give us tonnage for the road.

It is in the neighborhood of a hundred miles from Sutherlin to the Cascade line of the Southern Pacific by such route as we would have to (1411) take to get over the Cascades.

Our line is surveyed east from Sutherlin and projected for a distance there of possibly thirty miles and we have had a preliminary examination of the route from Sutherlin west to Coos Bay. We have had maps prepared and adopted just on that part of the road which we are building on. We didn't have any profile made of the whole route. We were building our main line fourteen miles—that would get to the timber—and we would probably then branch, and we would have later on continued the main line through. We didn't complete any of the fourteen miles. We graded it eight miles. (1412.) At that time we contemplated the construction of a mill two miles east of Sutherlin, two hundred thousand to two hundred twenty-five thousand feet daily capacity, eighty-hour run. That was in '15. The mill hasn't been constructed. The Roach Timber Company owns the timber. Its home office is at Muscatine, Iowa. We haven't entirely abandoned the plan to construct and operate the mill. It isn't opportune to build it now. I don't consider there is more softwood lumber being manufactured than should be at the present time. (1413–14.) The lack of transportation has caused us to defer the matter so long. We bought the timber in 1906, '07, '08. We knew the transportation conditions when we bought it. The Roach Timber Company owns about two and three-quarter million. Now wherein a road over to Crescent would assist our transportation, there is difficulty in getting timber shipped (1415)
787 out from western Oregon, since you have but one route, and a round-about route, and only one railroad to contend with. All you have to do when you go to try to interest anybody is to tell them you are on one railroad. They ask you what railroad and you tell them the Southern Pacific and you are flat. You are flat be-

cause they are not interested in developing property on the Southern Pacific Railroad—one road.

Q. Why don't you put a mill down there and start your operations and call on the Union Pacific for cars through the Portland gateway?

A. A fine thing to stick about three or four million dollars down there in a mill and expect the Union Pacific to furnish you cars.

Q. Well, if you gave them the business they would furnish you the cars, wouldn't they?

A. If they didn't have any place else to put them they probably would. When you would need them the worst there would be plenty of demand for them elsewhere and you would not get (1416) them.

Q. Now you think the Union Pacific is too far away at Portland; is that it?

A. Well, you can't get cars from the Union Pacific. You are on the Southern Pacific.

Q. Now how would you get cars from the Union Pacific if it terminated up here on Crescent Lake on top of the mountain, the other side of the Cascade Mountains?

A. Well, as I understand it, the condition is that the Union Pacific is going to build through, and, we hope, build
788 through our timber, and then we will be right on, not only the Union Pacific but we will be on the Southern Pacific.

Q. Oh; in other words, you are anxious for competitive transportation operations?

A. That is the only way you can get cars to ship your stuff.

Q. Well, who gave you the impression that the construction in this case contemplated taking the railroad over through your holdings?

A. How is that?

Q. Where did you get the impression, Mr. Fox, that the railroad construction contemplated by the petition in this case would reach the holdings of your company?

A. I don't know what the petition is, but there is certainly timber there that needs a railroad. If the Union Pacific is going to build through there, or we build through to the (1417) Union Pacific, we would have no difficulty getting across from the Union Pacific and taking them to our own plant over our own road, would we?

Q. Well, that route has been open for a long time from Sutherlin for you to complete the construction of your railroad. Now you said a little bit ago that you contemplated that the construction would take the Union Pacific over to your operation; now what did you mean by that?

A. Why, there can't seem to me to be more than one meaning to that. If the Union Pacific would come down through that country and open up that timber it would certainly be of inestimable value to all that timber in there, because what it needs is transportation east.

Q. Well, I know, but counsel's question called your attention to the terminus of this line at Crescent Lake, and asked you how
789 far it was from Crescent Lake over to the coast, how far it was to Sutherlin. Now you say it would not do you any good at Crescent Lake; that is right, isn't it?

A. No; I didn't say that.

Q. Well, is that the way you want to be understood?

A. I did not say that the railroad would be of any value to us at Crescent Lake.

Q. Well, you said what you wanted was to have it come on down (1418) there and take your timber, didn't you?

A. Come down and open up the timber in that country, sure.

Q. That is what you expected, if they got to Crescent Lake?

A. No; I didn't say any such thing.

Q. Now what is your expectation?

A. Nothing in the world, but if they put a railroad through there and open up that timber it will be of inestimable value to all of that timber, because that is what it needs, and that timber won't move until it gets it.

Q. Now this line it is contemplated will terminate at Crescent Lake?

A. I don't know that.

Q. You are 100 miles away, with the intervening mountains of the Cascades. Now how are you going to bridge that gap?

A. That is not my problem.

Q. Well, wherein would the line terminating at Crescent Lake be of any more value to you than the line terminating at Portland?

A. I don't see as it would.

Q. Well, it has taken quite a bit to get an understanding
790 on that proposition, but I was just wondering. Now you don't think the Southern Pacific would take that lumber from your mill, if you built one at Sutherlin, and give it to the Union Pacific at Crescent Lake, do you?

A. I didn't understand your question. (1419.)

Q. You say you don't build because you only have one railroad, that you would not be justified in putting in an expenditure of several million dollars development with only one rail service?

A. Yes, sir.

Q. I understood you correctly?

A. Absolutely.

Q. All right. Now if you should build on the Southern Pacific and the Union Pacific, or the O.-W. R. & N. Company should build across from Crane to Crescent, you would not feel any more secure about service than you feel now with the Union Pacific at Portland; is that right?

A. That is right. In other words, the Southern Pacific would have no more inducement to deliver our lumber, manufactured at our mill and destined to Union Pacific territory, through the Crescent

gateway, than it would through the Portland gateway. The Sutherlin, Coos Bay & Eastern Railway is still a live organization. Its authorized capital stock is $500,000. I wouldn't build that railroad from Coos Bay on the Oregon coast to Boise, Idaho, for the purpose of harvesting two and three-quarter billion feet of fir timber (1420), but that would open up a good many billion feet more. I would not classify us as railroad builders but we operate mills in Minnesota, Florida. We also have railroads, common carriers.

Exam. ROGERS. Mr. Fox, if the Union Pacific or the South-
791 ern Pacific built the extension requested from Crane to Crescent Lake and stopped there and put in through routes and joint rates with the Southern Pacific, what could your company, either as to mills or railroad, be depended upon to do?

A. If the Union Pacific was just built to Crescent Lake, which would make a necessity for our lumber originating on the Southern Pacific still to be taken up to Eugene and around to Crescent and then east?

Exam. ROGERS. Yes.

A. I don't think it would be any inducement at all. (1421.)

Exam. ROGERS. Well, in that case do you mean that your company, either as to its railroad or timber, could not be depended upon to do anything in the way of further development?

A. Well, are you talking about the railroad, or if we would do anything?

Exam. ROGERS. Yes.

A. I could not say at this time whether we would be interested in further development of that road or not. If that were done, any more than we were before.

From the information we have, it is our judgment that if we were projecting a line to Sutherlin, projecting our railroad to get across the mountains, the proper place to go through the mountain is at Crescent Lake. I could not say whether we would hit just at Crescent Lake or in south further than that. The important part is to get over to Crescent Lake, where there is a low divide, and to get in and follow that ridge down, in coming over the ridge there down to the Calapooya Creek, and we would come (1422) right down through our timber. There would be a continuation of our route. The pass over the mountains that I have in mind for the approximate

location—go out from Sutherlin and go up the Calapooya
792 Creek to the forks, then take the North Fork and start climbing here on this divide, that runs through here. You have got all that ground there to run through. You would not get up to the Bohemia mines; you would be in south of that when you would go up through here, then you would come out in here to Crescent Lake. I don't know whether we would get out in here at Crescent Lake or over here [indicating on map]. That is about 100 miles south of Crescent Lake. We have never had any estimate made as to the cost of such a line for that hundred miles. (1423.)

Q. You said something that I didn't quite understand with respect to mentioning the fact that you were located upon Southern Pacific lines and then any proposal would fail; will you tell me just what you mean by that—why a proposal would fail?

A. Because of the general opinion among the public of the lack of car service on the Southern Pacific road.

The mill we had in mind was to cut 200 to 225 thousand feet of lumber a day. There are quite a few mills on the Southern Pacific lines that cut at least that much; that have that capacity. Understand, I am saying eight hours a day. Now, there are mills that naturally run two shifts or three, the same size mill, but it would be cutting three times as much running three shifts. (1424.) A 200,000-foot mill for an eight-hour shift is not a large mill as mills go.

I have personally handled shipments of lumber. Not from the plants where we have manufactured it. We have never manufactured out here. But we buy large quantities of lumber out here and ship it East. But we are fearful of a car shortage if served by only one railroad.

As to whether I can name a single mill of all the mills on Southern Pacific lines in western Oregon that has been
793 short a single car in the last six years, that is, since 1922; I could not give you a specific instance where application for cars was made, because since we stopped our development down there we haven't investigated the car situation on the Southern Pacific. (1425.)

Redirect examination:

Q. Are you operating a mill, or have you a mill constructed at the present time, Mr. Fox?

A. Not in the West.

Q. And did you take that fact into consideration when you answered Examiner Rogers's question as to what could be expected from your company in the event this line were constructed to Crescent and joint rates prescribed?

A. It would not improve the situation any different from what it is now. I didn't mean from that that we probably—even if that was done we never would operate down there unless somebody built a rail to us, but it would not improve our situation a bit as to what we have now, if we shipped through the Portland gateway or around through Sacramento.

Q. Wouldn't there be some shortening of the mileage East?

A. Well, it would not make any difference in the rate to us, or the service.

Q. What is the importance of expedited service to the market East at the present time, if you know?

A. You have got to, because of the change in the market condition you have got to have quick service, because it has changed from

what it used to be. The yards in the East don't carry a large stock; they depend upon the mills to do that, and you must get your deliveries through quick. (1426.)

Q. In that event would a saving of from 200 to 400 miles in distance be of importance to western Oregon mills?

794 A. It would be if the railroad would take advantage of it and give us that much quicker delivery.

The only advantage that would be derived from the construction of the east and west line as far west as Crescent would be if it became necessary for us to build our own line to get the direct connection east, we would not have to build any further than Crescent. It would be practical as a timber development, considering the amount of timber tributary to the proposed line, to construct a connection across to Crescent. (1427.)

795 (The following question and answer were read: "Would it be practical as a timber development, considering the amount of timber tributary to the line that you propose, to construct a connection across to Srescent? Answer. Yes.")

Exam. ROGERS. The reason I asked that that question be read is I understood a while ago the witness to say it would not be feasible or practicable to build that 100 miles in order to develop his timber.

Mr. ELLIS. Well, I didn't so understand it.

The WITNESS. Well, I am assuming that his question contemplates naturally the other timber resources on a road from Coos Bay to Crescent Lake, and all the timber that it would open up would be tributary to that road. When I said yes, that is what I had in mind.

There are some mines along the line of the railroad which I have described, between the coast and Crescent Lake, that would be benefited by such construction; I am not well versed on that sort of thing. Such a line would tap the Umpqua Valley. I am including the entire line, Coos Bay to Crescent. Either one would tap the Umpqua Valley. Sutherlin is in the Umpqua. (1428.) The watershed, and Umpqua Valley.

There are some large sawmills located at points seryed exclusively by the Southern Pacific Company in western Oregon, I believe. The Oregon Electric runs down through there, which gives them a Great Northern connection. For instance, Mill City happens to get the Oregon Electric, or Silverton; Eugene has it; and the mills at Dallas. I don't know whether they get the Great Northern connection or not, but there are mills over at Toledo. I don't think those mills are of a capacity that would be considered

796 large mills to-day. They are not nearly as large as the tidewater mills in the State of Washington. They are not nearly as large (1429) as the mills of Portland (thinking of the Columbia River). The other mills I mentioned at Toledo are on tidewater. The Toledo mill is the largest and about the only one of a real large

operation located on the Southern Pacific. There is a large operation at Marshfield, too, on the Southern Pacific.

The Roach Timber Company is affiliated with lumber products, manufacturers, and sawmills in the east through common stock ownership. Those affiliated interests are the Roach & Musser Sash & Door Company at Muscatine, Iowa; the Virginia & Raney Lake Lumber Company at Raney Lake, Wis., and the Standard Lumber Company in Florida. The Roach & Musser Sash & Door Co. at Muscatine, uses Pacific coast softwood lumber (1430), to a large extent. A very small part of the product of the timber sawed into lumber would move to the Roach & Musser Sash & Door Company with the development of the timber tract east of Sutherlin.

THORNTON T. MUNGER was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct examination:

I live at Portland, Oregon. I am in the research department of the United States Forest Service. My title is director of the Pacific Northwest Forest Experiment Station. I have been in the forest service (1431) 20 years and in charge of this particular research department for four years. In this work I have been employed almost entirely in Washington and Oregon. In my work in the Federal Forest Service I have made studies to ascertain the rate of growth of Douglas fir forests. I made a study in 1909 and 1911, which
797 . was published the succeeding year, and in the past four years under my direction that study has been continued—a study of the rate of growth of Douglas fir forests in western Oregon and Washington. The results of such studies have been reduced to the form of standard yield tables—tables which show for different qualities of land what rate of growth may be expected at different periods. We carried them from 20 years up to 160 years. Those show in cubic feet and in board feet on the (1432) normal acre, the different kinds of land. I have made some computations of statistics for the 15 counties of Oregon west of the Cascade Mountains and north of the Rogue-Umpqua divide; that is, excluding the counties of Jackson and Josephine. The total area in acres of those 15 counties in round numbers is 15 million acres, or to be exact 14,959,000 acres. The net area in those 15 counties comprised in existing national forests is 3,926,000 acres. I have an estimate of the timber standing on this last mentioned acreage in the national forests at the present time; it is about 77 billion feet. The area in those 15 counties in private and State ownership, and what is called the Oregon-California land grant, is 11,033,000 acres. The area in those 15 counties in 1925 in farms was 3,835,000 acres. The approximate area in those 15 counties, in 1924, that were in crops (1433) other than timber crops, was 109,000 acres, that is, in crops harvested, according to the statistics of the Department of Agriculture. (1434)

In 1926 the acreage in these 15 counties in commercial timber lands, that is to say, private ownership, State ownership, and in the so-called Oregon & California Land Grant, was 5,158,740 acres, according to the figures of the State forester. My estimate of the stand of timber on this last mentioned area is 181 billion feet.

798 Q. Now, what is your estimate, Mr. Munger, of forest land—when I say forest land, I mean by that land that is better adapted for use as growing forest crops than for any other purpose—that is included in private ownership, in the Oregon & California Land Grant, or in State ownership? What area?

A. I am of the opinion that it is very conservative to state that approximately 50 per cent of the existing private State and O. & C. acreage in this area is absolute forest land, will probably continue to be devoted to forest purposes for an indefinite period, and that means 5,516,500 acres.

I have made an estimate, also, of what I call absolute forest land in the entire 15 counties, including in that the acreage in the national forests that would answer that description; (1435) including the entire acreage of the national forest, which is practically all absolute forest land, it amounts to 9,442,500 acres.

Based on these estimates of acreage and existing stand of timber, I have also made estimates of annual growth on the private, State, and O. & C. grant lands. Taking our yield tables, and discounting them by 30 per cent as an allowance for poor utilization and occasional losses by fire, understocking, and so on, I have assumed that this land will grow at the rate—is capable of growing at the rate of anywhere from 250 to 800 board feet per acre per year, and, as an average figure for the entire territory, 532 boad feet.

The 532 board feet being per acre, per year, I can state, then, the estimated annual growth on private, State, and O. & C. grant lands, based on the acreage and stand that I have previously estimated. That amounts to 2 billion 933 million board feet.

799 I have computed similarly the annual growth (1436) exclusively on the timbered stand in the national forests in these 15 counties. That average growth is not as high as for these private lands, because it is a higher altitude, and more rough, rocky, and barren land. The average growth I have judged to be 234 board feet for the area under consideration. That is per acre, per year, and that would make the estimated growth of the timber now in the national forests in these 15 counties annually, 919 million board feet.

My estimate of the annual growth of timber, both in the national forests and in private, State and O. & C. grant lands annually, aggregated, is 3 billion 842 million feet, board measure. (1437.)

I have information respecting the period of time in which it is necessary to grow a tree of Douglas fir to a size where it can be cut and sawed into lumber. That, of course, depends upon the character of the land and the product desired, but there is considerable timber being cut in the region as young as 50 years now.

Under favorable conditions of soil and climate the annual growth of Douglas fir timber will run as high as 1,500 board feet per acre per year on small areas.

In the Forest Service, and for the purpose of the standard yield tables I have mentioned, the lands are classified or rated as to productivity. The yield tables provide for five different qualities of land, with a range in growth proportionally. I can give the minimum and maximum ranges of growth employed for the purpose of these standard yield tables (1438) annually per acre, in
800 board feet. The rate of growth for the first quality is 1152—the best quality of land, and 96 is the very poorest quality, of which there is very little in the region under consideration.

L. C. MICHENER was thereupon produced as a witness on behalf of complainants, and, having been first duly sworn, testified as follows:

801 Direct examination:

I reside at Cottage Grove, Oreg. In appearing in this hearing I represent the Chamber of Commerce at Cottage Grove. Cottage Grove is located 22 miles south of Eugene and has a population of from 3,000 to 3,500. The principal industry of this community is lumbering. (1439.) At the present time three sawmills are operating in this neighborhood and a fourth, Anderson & Middleton, is not cutting any timber at the present time. All of these sawmills are located in or adjacent to Cottage Grove. They obtain their timber supply from territory lying west, east, and southeast of Cottage Grove. I have information as to the amount of merchantable standing timber tributary to the Cottage Grove area. A number of cruises have been made, and apparently none of them are exact, but taking these cruises as a basis of making an estimate, it is variously estimated at from 56 to 76 billion feet. The timber that is west of Cottage Grove is on the east slope of the Coast Range, and on the headwaters of the Siuslaw River (1440); that east of Cottage Grove is on the Row River and tributaries, and that southeast is on the Coast Fork of the Willamette and its tributaries.

As to whether the timber which I have described will eventually be milled in Cottage Grove and that vicinity, or whether some of it will go to other milling points, this timber has got to come through Cottage Grove in some way or another, some form or another. It can't get out in any other way.

This timber is not being cut very fast at the present time. As to whether any of it is being manufactured by mills other than the three I have mentioned, there are any number of small mills.
802 When I say "small" I have in mind mills cutting up to 30 or 40 thousand feet a day.

The interest of the Cottage Grove Chamber of Commerce in this case is the development of this district. We want to see this timber cut (1441) and marketed, because there is a large portion

of it that is ripe, in fact, some of it is over-ripe, and we depend on lumbering.

Q. In what manner do you believe the construction of the cross-State line would benefit your community and hasten the cutting of your timber supply?

A. It would give us additional transportation facilities.

Q. How would that lumber move to reach the cross-State line?

A. It would have to go to Eugene, from Eugene to Crescent Lake over the Natron cut-off.

Q. Would that materially shorten the distance to the Middle West and Eastern markets?

A. Evidently it would.

I am familiar, in a measure, with the present practice with respect to the marketing of lumber and the extent to which a shortening of the distance or the time of transportation is important. The present situation in that respect is this: We have to look to the markets of the Middle West for our future business. We can't afford to cut and ship lumber by rail to California in competition with offshore shipping of the Coos Bay and Tillamook Bay mills, Columbia River, and the harbors of Washington. We can't compete with those.

There has been a change in the lumber trade that would cause the factor of distance of haul or time in transit to be more important at the present time than it was (1442) a few years ago, so far as lumber is concerned. The lumber dealers owning the yards of the East don't carry as large stocks as they did a few years ago,
803 but they depend upon prompt shipments from the mills of the West to supply their trade. The effect of that condition on the mills of the Willamette Valley, it seems, is to work a little hardship on us. At the present time we can't get the transportation to the East that we would like to have. It takes too long, apparently, for our lumber to reach the Eastern markets. As to whether that is true in the Middle West and on the Atlantic coast alike I don't know so much about the Atlantic coast. It is true of the Middle West. We don't ship much to the Atlantic coast, very little, and all of that is cross-country—transcontinental—shipment.

I have information indicating the markets to which the lumber from the Cottage Grove district now moves. Under partial production last year, no mill running (1443) to full capacity, we shipped 1,606 cars south over the Southern Pacific, mainly to the State of California, with minor shipments to other lines served by the Southern Pacific only, and 1,800 cars even to the districts served by other lines, that is, the Pacific Mountain States, the States lying between the Mississippi River and the Pacific mountains, and that east of the Mississippi River. These two figures constitute the total lumber shipments from Cottage Grove during the year 1927, that is, a total of 3,406 cars, 1,606 of them south and 1,800 of them to the territory to the north and east. Of these 1,800 cars 368 went east of the Mississippi River. We have no service at Cottage Grove that

enables shipments to be made by water to the Atlantic seaboard. (1444.) We have to depend on rail service exclusively.

I obtained the information of shipments during the year 1927 from the records of these lumbering concerns.

I have nothing to add to my testimony except that we would like to have a little rail development in Oregon so we can get
804 this lumber out. That is all we are interested in.

These 1,800 carloads did not move through Roseville and Ogden; they moved through the Portland gateway. (1445.) The records show the shipment from Cottage Grove as being either north or south. This 1,600 carloads went south from Cottage Grove; the 1,800 carloads went north. That is, they moved Southern Pacific to Portland and then were turned over to the Oregon-Washington Railroad & Navigation Company and the Milwaukee and the Hill Lines.

The Standard Bridge Company of Omaha, Nebr., have a seasoning plant at Cottage Grove and have a new way of seasoning lumber. Last year they shipped 253 cars. They expect to increase this to 1,800 cars annually, which will take care of the cut of all the small mills in the vicinity of Cottage Grove, and that relates only to the lower grades of lumber, having nothing to do with the clears or uppers.

In checking up on the shipments from Cottage Grove I was not (1446) endeavoring to find out the actual routes traversed, but was checking particularly to find the States of destination. I do not recall whether I made a particular check of those figures to find out the actual route followed. As to whether I am certain that all of the 1,800 shipments moved through the Portland gateway, that is the information that these mill owners gave me. Their records showed that to be true.

Cross-examination:

My business is accounting but I have been connected with the Cottage Grove Manufacturing Company; due to the fact I was appointed chairman of Railroad Committee of Chamber of Commerce of Cottage Grove, I got these figures out. (1447.) Am under contract to go with the Wiest Brothers' sawmilling outfit when
805 they start operations. The Anderson & Middleton Milling Company have completed their long pond and they are going to construct a mill, to have largest operation around that territory. They have a mill at Cottage Grove but haven't operated it since the first of December, last year. Apparently they are not very well satisfied with the present shipping facilities. (1448.) They own the Oregon, Pacific & Eastern Railway, a sort of a logging road and their new mill is being constructed on that. I only traced the 1,800 cars as to States of destination. Cottage Grove is south of Eugene and it is possible, but hardly probable, that the 1,800 cars might have gone to Eugene and then east over the Southern Pacific New Cascade Line, as I have the figures showing destination of the cars shipped

over Southern Pacific south. Sixteen hundred cars went into California and southern territory. (1449.) It is immaterial whether it goes to Eugene and then over the Natron cut-off, or whether
806 it goes south over the Siskiyou route—we call it shipping to the South. The people in our territory have not paid any attention to the construction of the Alturas route. The newspaper reports state that it is being constructed, that is all I know. We haven't given much consideration to how much it is going to shorten our present routes because lumbering is in a slump. We have more timber adjacent to Cottage Grove than any other town in the United States. There are lots of other parts of Oregon that also have great quantities of timber. (1450.)

We don't want to remove the slump by the cross-State line; we would like a little better price. The price of lumber is depressed. The demand is sometimes equal to the cut, and at other times isn't. Anderson & Middleton moved in at Cottage Grove within the last three or four years. (1451.) They are big operators on Grays Harbor and the Union Pacific runs into Grays Harbor; also the Hill Lines and the Milwaukee. They were operating up until some time during the month of December, 1927, when they closed down, I mean at Cottage Grove. A part of the 1,800 cars originated from the Anderson & Middleton mills; can't say definitely how many (1452) but a very good percentage. Because these cars were destined for points in the Middle West, Missouri River territory, and in the inter-mountain territory, I concluded in the main that is where they were destined; and that they went through Portland, since the figures I have show their trails by cars, 1,606 cars south, shipped south from Cottage Grove, the destination was California, Nevada, New Mexico, Texas, and one car into old Mexico. Those were on the Southern Pacific route proper. With the exception of a few cars that went into Idaho and Washington, the other 1,800 would go to points east of Ogden and over through the inter-mountain country and the
807 Missouri River country (1453), and Montana. I can't positively swear that none of the cars went down through Roseville and go to the Union Pacific at Ogden, but the routings which I looked at don't show that to be the case. (1454.)

I can't be positive as to figures, but I believe from Eugene to Crescent Lake it is 98 miles and 22 from Cottage Grove to Eugene. The Southern Pacific Line shows 144.5 miles from Cottage Grove to Portland.

They don't carry the stocks in the Middle West they used to and they want the service. (1455.) They want the mills to carry the investment in their stocks, so they won't have to carry it. I can't positively state what advantage would accrue to our mills by turning that lumber over at Crescent Lake to a cross-State line, as compared with turning it over to the same railroad at Portland, but it wouldn't do us any harm. Development is always good. (1456.)

Redirect examination:

The difference in distance of 142 miles would, I presume, make a difference of 24 hours, approximately, in the delivery of the lumber to the East.

Recross-examination:

They figure a hundred to two hundred miles a day, I believe, as a very fair average for the shipments of lumber. (1457.) Largely the lumber shippers allow the carrier or the purchaser to route their shipments. The mills pay very little attention to the routing. I won't positively say it is a fact that a car of lumber out
808 of Cottage Grove takes six weeks to reach its destination in any part of the United States. That is hearsay on my part. (1458.)

LYMAN GRISWOLD was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

I am a civil engineer in private practice, office Porter Building, Portland; about thirty years experience in civil engineering. In 1917, prior to enlistment in Army, I was employed by the Portland & Southeastern Railroad Company, as chief engineer. Upon my return from overseas service (1460) Chief Engineer Huson employed me in survey work. Later I made some power investigations of the property. The original proposed location of the railroad in which I was involved was the construction of a line from Mt. Angel to Bend. Mt. Angel is 31 miles in general southerly direction from Oregon City in the Willamette Valley. The general route traversed by the proposed line from Mt. Angel to Bend (1461) was from Mt. Angel to Silverton, thence southerly through Sublimity to Stayton, thence up the north fork of the Sanitam River, through Hogg Pass to the eastern side of the mountains, to the town of Sisters and from there to Bend.

Q. I hand you a map marked Exhibit 17 and ask you if the proposed line of railroad is shown thereon.

A. I think a part of it is. I see no indication of the line from Mt. Angel to Stayton and from Stayton up the river, but there is a line up that north fork belonging to the Southern Pacific Railway, and there is a dotted line on this map that would seem to connect the Southern Pacific line with Bend.

By dotted line I mean dashed line extending in a northwesterly direction from Bend. That seems to be the general route. I never saw this map until just a little while ago. I have not been
809 (1462) over all of the route between Bend and the point where a connection is shown on Exhibit 17 with the black line extending easterly from Albany up the south fork of the Santiam. The surveys of that route were made by other men. I had the maps and profiles and had arranged to go over all of that line when litigation stopped the work. I am familiar with the general character of the country traversed by that proposed route and the character

of necessary grades but don't remember the rate of grade between Mt. Angel and Stayton, except it was very light; that is a flat country, but between Niagara and the foot of what they call the mountain grade on the east side of the Cascades there was a ruling grade of two per cent. Niagara is on the Santiam River, I believe on the terminus of the present Corvallis & Eastern branch of the Southern Pacific Company. The distance between Niagara and Bend via this route is about eighty miles. The character of construction over this route is not difficult. (1463.)

The estimated cost of construction between Niagara and Bend is a little over five million; the total estimate of construction cost between Mt. Angel and Bend was about eight million dollars. The approximate cost per mile between Niagara and Bend would be roughly $80,000 a mile. There is a 50-mile section known as the mountain section that was estimated to cost five million dollars. From the foot of the grade on the east side of the mountains to Bend, a distance of thirty or forty miles, the construction would be very light; don't recall exactly but believe it was five or six hundred thousand dollars. There were neither tunnels nor large bridges required on that route. (1464.)

After getting down the mountain slope the territory between Hogg Pass and Bend is a rolling country, rather a slope; slopes toward the Creeked River—toward the Deschutes River; and the
810 slopes are rather gentle and the survey remarkably simple.

The natural resources tributary to this proposed line are principally timber from Stayton to Bend. As I recall Colonel Huson estimated about forty billion feet tributary to the survey between Niagara and Bend; I thought that some other roads might take some of that timber, so I cut the estimate to about twenty billion that was exclusively tributary to this particular line. I think the route described is an economic and practical route for the development of that twenty million feet of timber—about the best you can get in there. (1465.) I would say the logical outlet for the timber would be in both directions. This company had some proposed connection and they proposed to haul logs west and figured on hauling mostly finished lumber east.

I don't think there are any present plans for the development of that project.

The elevation of this line at the summit of Hogg Pass is between four and five thousand feet. Believe the snow conditions would be about the same as elsewhere in the Cascade Range. As to eastern outlets, if they built to Bend and stopped there they would only have the Union Pacific and the Oregon Trunk. The local promoters had not plans for a line east of Bend. (1466.) The Hogg Pass route was considered in conjunction with a route extending thence easterly. I should think such a route would be practical in conjunction with the cross-State line proposed by the Oregon Commission; I would think it would be, in connection with any line through central

Oregon. It would be practical to use it in connection with that broken line between Bend and the lake on down here [indicating on map]; Harney Lake, I guess it is. It would also be practical to use it in connection with a line extending to Crescent; it would
811 be an added distance. (1467.) The estimates of construction cost were made in 1920, pretty near the peak of construction prices. The grading costs now would be lower. It is my judgment that that is a feasible route for the outlet of that timber and for leading out of the Willamette Valley for a more direct route east as between Portland and central Oregon plateau. Naturally it would have to get out over some railroad and I know of no better route for that vicinity than the one down the Santiam River. (1468.)

Comr. McManamy. Mr. Ellis, just what is the purpose of this testimony in this proceeding?

Mr. Ellis. In the original case the examiner had suggested further consideration of various proposed locations for the east and west line. The commission in its report also suggested that it desired further information as to the most desirable location for the east and west line. The location will depend to some extent upon the possibilities for further extension and tapping timber west of our proposed terminus, and we feel the commission should have this information before it in order to properly determine the value of the two locations which are shown on our exhibits, the one going direct to Crescent, which Mr. Newell has recommended, and the one going through Bend, which he has also set up in his report and which some of these interveners are favoring. We simply want the commission to have all of the information available concerning the possible further extension and use of the line when it is once constructed.

Cross-examination:

I was not instrumental, by conference, consultation, or by actual field work, in fixing upon the route and location of the Port-
812 land & Southeastern Railway to Bend. (1469.) I formed no opinion in connection with my studies as to whether it was the route from central Oregon to western Oregon points, I was engaged to investigate and I considered this particular line a feasible route for the purpose but I made no comparison with any other route. I have no judgment on the question of whether the route, if one is made across the State, should be through the pass occupied by the Southern Pacific into Eugene, or through this Hogg Pass. With reference to the statement that it was the ambition of some of the promoters to go through to Salt Lake or Ogden and that Contact, Nev., was an important consideration, it was due to the fact that they having mining interests in Contact and it was one of the great traffic inducements for the construction of the road from Rogerson, Idaho, to Wells, Nev. (1470); I don't know whether the Contact mines have demonstrated that they are big producers or not.

I am aware of the fact that the Northern Pacific and Great Northern, through their ownership of the Oregon Electric, are now

building into the Santiam timber, east from Albany. I haven't gone into it very carefully. I thought they were on the other river, that is, the South Fork of the Santiam. Now whether that leads to Hogg Pass I can't tell you. It is the same general territory. (1471.)

There is a Southern Pacific track; I don't know whether it runs from Albany over to a town named Hoover.

Mr. Louis Hill, chairman of the board of the Great Northern, and his associates, own a great volume of that timber that is tributary to the Santiam. I don't know about the Weyerhaeusers' interests. (1472.)

Redirect examination:

The promoters of the line of railroad, discussed, contemplated using grade constructed in previous years; a part of the
813 Oregon Central and Eastern, I think, or Corvallis and Eastern it was at the time we made the investigation. There are about six miles they expected to use and as I recall it was built about 1888 or 1890. The company that originally built the grade, planned a line across the State. I think there was just a technical laying of rails on the section of the grade. (1473.)

ROBERT W. SAWYER was thereupon produced as a witness on behalf of the Bend intervenors, and, having been duly sworn, testified as follows:

Direct examination:

I have lived in Bend since October, 1912, and am editor of the Bend Bulletin; am also a member of the Oregon State Highway Commission; have been since August 1, 1927. Prior to that I was county judge of Deschutes County for about eight years. (1474.) During my residence and activities, mentioned above, I became very familiar with the local developments of the community. My business has made it necessary for me to become interested, not financially, but as a citizen. My experience as highway commissioner of the State familiarized me thoroughly with highway transportation. I have been attending the sessions of this hearing considerably.

My opinion, based on residence and knowledge of the needs of that particular section, are that Bend and country adjacent are now served by railroads, so that there is no absolute necessity for a cross-State line, but a cross-State line would be of great benefit in addition to the present roads (1475), because it would give a shorter, more direct outlet to eastern connections for a portion of the great volume of lumber tonnage that moves out of Bend, and for certain of the agricultural products developing there, that move east; also for sheep going from the ranges of central Oregon to the feed lots of Idaho. We frequently have stories in the Bulletin of the
814 large number of lambs being shipped from that section to Idaho for feed. It is my understanding the greater portion of the lamb production is shipped to Idaho; it is shipped down the

Deschutes River to the main line and then east and if a line were constructed across the State from Bend, it would reduce the mileage.

Bend is located on the Deschutes River, which river is from twenty-five to thirty miles from the summit of the cascades and the timbered area lies between the summit and the river. (1476.) There is a volume of timber adjacent to and millable at Bend. The Shevlin-Hixon Company and the Brooks-Scanlon Lumber Company produce, when running their regular rate of two shifts a day, between 160,000,000 and 180,000,000 feet apiece, per annum.

Referring to Bend's petition for an extension westward over the Hogg Pass into the Willamette Valley, it would afford an outlet for the timbered area lying to the northwest of Bend and on over through Santiam country; a more direct route for products of the northern Willamette Valley. As a layman, it occurs to me it might be of considerable advantage to the Union Pacific, during its times of tie-up in the Columbia Gorge on account of storm, to the extent it would stop traffic. (1477.) As to weather and snow conditions in Hogg Pass, there is snow there, probably the same amount of snow that you find anywhere at the elevation of about 4,600 feet, in the Cascades. It is my opinion the snow conditions there are better than on Natron cut-off. I have been on the present route of the highway from Sisters to Albany and on foot through Hogg Pass and over to Marion Lake and down to Detroit, and there is a considerable body of timber to the northwest of Sisters, of the western yellow pine, pinus ponderosa, and a less amount as you approach the summits and a considerable amount of hemlock, mountain hemlock.

West of the mountains are heavy growths of fir, found on
815 western slopes. (1478.) The road would be bordered by good stands of timber from close to Bend until you reach the farming section of Willamette Valley east of Albany except for this possible twenty to thirty miles, and between say Blue Lake on the east side of the Cascades and Big Meadows on the west side. There are no railroads penetrating that timber from the east side at present. I have been through that country and if this proposed cross-State road should be located north of the Public Service Commission's route and skirted the timber along the Blue Mountains in the Ochoco Forest lying between Burns and Bend there would be about a billion feet of western pine that would be available to such a line. I am not a railroad expert but believe you could skirt close enough to the timber so that it would be accessible.

Two surveys have been made across that portion of the State (1479) I understand one by the Oregon Trunk about 20 years or more ago and one by the so-called Oregon, California & Eastern from Bend to Millican, to Burns or some point between Burns and Crane. I was told the latter named line was a good line; can't say as to the Oregon Trunk. I have been through Fort Rock Valley a number of time and as to the irrigation experiments that have been made, I know they are getting water and producing very good

crops of alfalfa. (1480.) State geologists have demonstrated water is there, accepting power at reasonable rates, irrigation is very possible. I have had something to do with the promotion that has taken place in connection with the so-called Deschutes project. The Deschutes project covered the irrigation of four units of land lying in the Deschutes Basin north of Bend and three east of the Deschutes and one west of the Deschutes River, these projects to be irrigated by water stored in the Deschutes above Bend at the so-called Benham Falls Reservoir and diverted to the land
816 south of Bend—stored in Benham Falls Reservoir south of Bend and diverted to the land north of Bend. At the (1481) present time the effort is being made to secure Federal aid for the development particularly of the north unit of the Deschutes. I am chairman of the Deschutes Project Association, which is comprised of the commercial organizations and farm organizations of the valley promoting the enterprise and particularly in the securing of government aid. I have been to Washington in that regard several times. About 1921 or 1922, as I remember the date, an appropriation was made by the Congress for the beginning of the work. The appropriation lapsed. The work was not begun because of the attitude of the people of the north unit in regard to some of the conditions set up by the Bureau of Reclamation. Since that time, after the folly of that procedure was realized, we have been endeavoring to secure another appropriation. At the last session of Congress a bill authorizing an appropriation was favorably reported by both the House and Senate committees, and it passed the Senate and is now pending in the House.

Q. What area of land, or have you yet testified as to what area of land would be put under irrigation? (1482.)

A. The north unit, which is particularly being promoted at this time, contains for irrigation about 106,000 acres, according to the highest estimate, and something between 90 and 100, according to revised estimate suggested by bureau engineers.

That country is all in private ownership and largely now being farmed by dry farming methods for the production of wheat. It has not a very large population.

As to the snow conditions across central Oregon, between
817 Ontario and Bend, as compared with the snow conditions via the present route traversed by the O.-W. R. & N. line, I know about part of the route, and I have what I think is reliable information as to the rest. I think the snow conditions are much easier for railroad operation between Bend and Burns and Ontario than over the present Blue Mountain route.

Q. And would your statement in that regard apply over either route shown in the maps filed in this case, either direct to Bend or direct to Crescent?

A. I believe that in the vicinity of Crescent and for a short (1483) distance to the east there would be more extreme snow conditions

than from Bend to the east. It is a somewhat higher elevation and they have more winter there than we do.

In order of desirability, so far as snow is concerned, I would say that from Bend to the east would be number one, and Crescent number two, and the Blue Mountains number three. I think that is about it.

As to what extent the operations of the Oregon-Washington Railroad & Navigation Company over their existing lines are interfered with by snow conditions, in the Columbia Gorge, between Hood River and Troutdale possibly once in four years in my memory there has been complete inability to use the road because of snow or bad weather conditions, snow and ice. From over the Blue Mountains I simply know that they have much snow to handle during the winter. In going through I have seen plows at work and high banks of snow.

My connection with the highway commission causes me to be particularly familiar with the snow conditions in the Columbia Gorge and over the Blue Mountains. We find it necessary to main-
818 tain equipment and crews during winter months to keep our highway open (1484) over the Blue Mountains and to a less degree in the Columbia Gorge, because, so far as the highway commission is concerned, its jurisdiction extends only to the Multnomah County line. But I know the Multnomah County has a tremendous snow problem in the gorge.

As to what the highway department has done, or what it is doing along the line of highway construction in central Oregon adjacent to the proposed cross-State line, or in that general territory: The Dalles-California Highway, running from the Columbia River on the north to the California line on the south, is finished. The Central Oregon Highway, from Bend through Burns to Vale and Ontario, is on the State program, is under construction; that is, there are finished sections and more to be put on as our finances permit. The Fremont Highway running down to California from a mile or two south of Lapine, over into northern Lake County and by Fort Rock and Silver Lake and to Lakeview and the California line, is under construction. There are other highways, but those are the ones particularly in the territory to which you refer.

In my opinion the country across central Oregon is not a difficult country to build highways through. (1485.) We have just finished a 27-mile section on the Central Oregon Highway east of Bend, at an average cost of $2,200 a mile. That is for grading only —rather inexpensive.

I think I am familiar to some extent with the agricultural production of our section of the country.

As to the reasonableness of Mr. W. L. Teutsch's estimate in this case in his Exhibit No. 1, page 13, showing an estimate of present agricultural tonnage available for movement over the pro-
819 posed cross-State railway from Deschutes, Crook, Jefferson,

and Wheeler counties, totaling 312 cars, I could not give you any opinion on that subject from my own knowledge. I think a witness who will follow me has such information gathered from the local county agent.

Cross-examination:

Our grading of the mileage east from Bend on the highway was not substantially on the old highway location. It is somewhat to the north of the old highway location. That is, from the point we began east of Millican, running toward the half way point at Brookings; that is into the Hampton Valley. (1486.) That grading was begun last fall and finished I think in June of this last year. That is a comparatively level stretch along there. There is a little lava rock formation there. There was some rock work to be done. Lava rock is somewhat harder to handle than ordinary rock, where it occurs. This is largely open country from Fort Rock.

The highway route over the Cascades from Eugene to Bend is known as the McKenzie Highway over the McKenzie Pass. This last season it was closed to travel, as I remember, from (1487) the 9th of December to about the first of June. This is the first year an effort has been made to keep it open, that is to keep it open longer in the fall and open it early in the spring. An expenditure of about 10 thousand dollars was made to keep it open. I came across there on snowshoes in March, and there was then an average possibly of 8 to 10 feet of snow, but much more came during March and April. As to whether there is any such snowfall, or anything comparable with it in the Blue Mountains, on the Kamela Hill, I don't know; I think not, though. We keep our highway open all winter
820 there, our Oregon Trail Highway, and under much worse conditions also in other places. We have over 30 feet on the Sand Mountain Hill, on The Dalles-California. (1488.) We have kept that open for the last two years, since the work was begun.

Q. But you compared, I may have misunderstood you, the route from Bend to Ontario in central Oregon as presenting the least obstacle, as far as snowfall is concerned. Then, as I understood you, you said the route through the Cascades would be second?

A. No. The route from Crescent to the east, not through the Cascades to the west.

Q. Crescent to the east is right in the location that we are discussing, where you have the heaviest snowfall in the State, isn't it?

A. No; I think not. What I said to Mr. Ellis was that, in order of snow conditions, from Bend east was the most advantageous, from Crescent east next, and over the Blue Mountains third. I think from Crescent east we would be in practically the same snow conditions as we would from Bend east, except for perhaps the first 40 miles or so east from Crescent. There we encounter very heavy snow.

Q. As a matter of fact, some of your mills there at Bend found (1489) it impractical to locate any operation up at a higher elevation because of snow conditions, didn't they?

A. They located at Bend because of its greater desirability in the matter of snow and open weather, I understand.

Not to my knowledge did Shevlin-Hixon, or Brooks-Scanlon, actually purchase a millsite up some considerable miles south and west of Bend that they could not develop because of snow conditions.

821 They may have done so, but I didn't know of it. I think the Gilchrist Company bought a millsite near Lapine, but I never heard of either of the other companies doing it. Gilchrist is not operating. There is a great depth of snow up there at Crescent Lake, in the Southern Pacific operation. As between Crescent Lake and Blue Mountains I am not certain which is more severe. In the vicinity of Crescent Lake I would guess there was 8 to 10 or 12 feet of snow in the ordinary season; that is, total snowfall. I don't think there is ever that much snow on the ground at one time—that is (1490), in depth.

As to the difficulties of the Columbia Gorge, the snow conditions, that difficulty does not obtain every year. In 16 years there have been only four such instances. Any line operated into Bend by the O.-W. R. & N. or the Oregon Short Line would proceed down the Columbia River to go to Portland unless the route over the mountain, over the Hogg Pass, were built. We would not improve the Columbia River condition any by building from Crane or Burns to Bend. (1491.)

I was a witness in the Klamath Basin cases. I and the other people at Bend urged the extension of the Northern lines, or of the Great Northern, into Klamath Falls from Bend.

Q. And it is a fact, is it not, that the route over the Northern lines from Bend or from the Klamath Basin to the principal distributing centers for lumber in the East are practically as circuitous and as long as the present Southern Pacific route through Roseville?

A. It all depends on what you mean by "practically." I think it is somewhat farther by Roseville. I haven't the mileage in mind.

822 I consider the Northern Pacific and the Great Northern routes from Bend to the principal lumber consuming territories of the country fairly direct routes. That is, they reach, as I understand it, more largely the northern tier of States, and going up through Spokane they get into that territory. Of course, you remember that the Bend interest in the extension of the Great Northern (1492) was in order to get into California, chiefly, with its agricultural products, and to bring them into Bend, the California produce to Bend.

I think the Great Northern and Northern Pacific do not take out of Bend much more than 50 per cent of the lumber produced there. I think it is about an even break between the two lines of road. I think that traffic should be taken from them and turned over the

Union Pacific to carry over the cross-State line only so far as by so doing you would reach more directly the destination of their lumber. I believe that as they go to the northern tier of States the northern lines of traffic would not be served by this cross-State line.

Q. But you don't know what proportion of their lumber finally finds a destination in——

A. Well, we have figures here. I haven't in mind that, but we have tables showing all those figures.

I would urge that in so far as the cross-State line for lumber traffic is shorter from Bend the northern lines give up that traffic to the aid and support of the cross-State line. (1493.)

In the Klamath Basin case, before Mr. Mahaffie, I appeared as a witness for the Oregon Trunk, which I think was a petitioner asking for a certificate. That certificate was finally granted.

823 I should say that the public necessity in this case is greater than in the Klamath Basin case.

I think all of the O. W. R. & N. traffic that went through (1494) Ontario by the present route would go by the cross-State route and still through Ontario, and any of the Northern Line traffic that was destined to points south of what I understand to be their territory would also be diverted.

Comr. McMANAMY. Judge, am I correct in understanding that it is your attitude from your answers to Mr. Dey's and Mr. Rogers's questions that the real purpose in this case is service for the public rather than an equitable distribution of traffic as between carriers?

A. Oh; yes, sir; of course.

Comr. McMANAMY. Now, will you tell me something concerning the highway conditions in the central and south central part of the State, what the State is doing or proposing doing in the matter of developing its highways there?

A. As I have already said, the Dalles-California Highway, from the Columbia River on the north, running south through Madras, Redmond, Bend, Lapine, Crescent, near Fort Klamath, to Klamath Falls and the California line, is finished.

The John Day Highway, beginning with its Ochoco Highway connection at Redmond, is finished to the east as far as Mitchell, and a gap of about 35 miles is to be finished, and the section is now under construction—(1495) it is an even higher standard of construction than the John Day Highway. Our standards have improved since the John Day was built. The John Day Highway still on to the east is finished.

The Central Oregon Highway from Bend across the so-called high desert through Burns and out the Malheur Valley to Vale and Ontario has very little finished work on it, but it is on the State program and will be built as fast as funds are available.

824 From The Dalles-California Highway south to Lapine, the Fremont Highway runs via Fort Rock, the vicinity of Fort

Rock, Silver Lake, Paisley, Lakeview, to the California line, partly built, and to be finished as fast as possible.

From Lakeview to Klamath Falls a highway is all built, except for three sections, two of which are now under contract, and one section, about 10 miles, as I remember the distance, that is not yet provided for in any way, but that will be finished as soon as the money in hand. That is the State highway program in south central Oregon.

As to what is being done, other than advertising, towards the construction of the so-called Yellowstone cut-off from Lakeview across: The Yellowstone cut-off is in part over two State highways. That is, it runs in Oregon from the California line through Lakeview to Paisley on the Fremont Highway, which I have (1496) already referred to. From Paisley, on the Fremont Highway, running to the northeast to the Gap ranch on the Central Oregon Highway is about 85 miles, which the counties of Lake and Harney and interested organizations propose to improve. Then from the Gap ranch on east we are on the Central Oregon Highway again, which is on the State highway program.

Comr. McManamy. Now, when that program is reasonably completed, to what extent do you think it will serve the needs of that section of the State, that is, take care of its developments without additional railway construction?

A. It would take care of its passenger traffic, if I may describe it as such. But it couldn't handle shipments of a freight nature. In the first place, our laws as they now exist limit the weights that
825 may be traveled on highways, and the commission is interested always to see that the weights are kept within the carrying power of the highway without damage. So far as heavier cars are concerned, these highways will not be sufficient to provide for the development of that section of the State for carrying heavy freight. They will be largely limited to passenger travel and light trucking. (1497.)

Comr. McManamy. You haven't a very good highway from Burns down the Malheur River at the present time?

A. In starting on the other end the road is built from Ontario to Vale; then coming this way there is no construction anywhere on that line. There is a very good road from Burns to Crane, but that is possibly not to be on the final location. That is a matter now under consideration. Burns to the John Day Highway is not on the State program, but is being built by the counties and Federal aid through forest money. That is, it is a forest highway, being built by county funds and forest funds. Presumably it will some day be placed on the State system, but you can't spend State money on it now. It is partly built.

Comr. McManamy. Well, then, generally speaking, the program of the State highways which you have in mind will be pushed as rapidly as the funds are available?

A. Yes, sir.

The State Highway Commission has spent since the program was begun in 1917, the total expenditures, about $115,000,000. Those are the total expenditures made on the State system. Now, that is made up of county contributions, proceeds of the sale of bonds, gas-tax income, motor vehicle-license fees, and Federal aid. That $115,000,000 expended since 1917 does not include the expenditure made by Multnomah County in the construction from Portland up the Columbia River Gorge to Bonneyville, as the county
826 line. No State funds, by law are expended in Multnomah County.

Q. So, as a matter of fact, in western Oregon there have been very large expenditures on highways, running into millions of dollars in excess of this hundred and fifteen million; isn't that true?

A. Not on the State system. You understand, the Mutnomah highways are not on the State system. (1499.) Of course there have been many millions of dollars on the so-called market roads and other county roads, but not on the State systems.

Q. And during this entire progress this undeveloped center of the State, without rail transportation, has just languished and gone along without any State aid to speak of, and without any interests or money for highway construction; isn't that true?

A. The sections of the highways in central and eastern Oregon have been under construction at various times since 1917.

Q. Yes; but in just a little, small, indifferent way; isn't that true?

A. Well, I would hardly call it indifferent. We have been promoting the Dalles-California, for instance. We were not paralleling the railroads all the way when construction was begun. Of course, the Great Northern has come in since. The central Oregon Highway parallels no railroad whatever. The Fremont Highway parallels no railway except south of Lakeview. They haven't been built; no. (1500.)

Q. But that is the prospect for the railroad to look to as far as passenger traffic is concerned, and light freight traffic, isn't it, that they will be built as soon as the railroads are built in there?

A. Not as to passengers, the way I look at it, because the
827 railroad companies, as far as they are concerned, are developing their own bus systems.

Q. Well, they don't need any cross-State line to operate the bus if you will build us the road.

A. The Great Northern is now starting buses down the Dalles-California. I suppose you would put them on the central Oregon.

Q. Now, as a matter of fact, though, there haven't been any highways in central Oregon in a long, continuous section, except this Dalles-California Highway that runs between Bend and Klamath Falls; isn't that true?

A. Well, the Ochoco Highway, or, if you start at the summit of the Cascades, the McKenzie Highway, on down through Redmond

and over to Mitchell, is continuous construction, carried on all this time. There hasn't been continuous construction on the central Oregon or on the Fremont. (1501.)

Q. The scenic route isn't presented or afforded over in central Oregon. The so-called high desert don't attract the tourist at all, and won't if you construct highways, will it?

A. Not possibly for local interest, but as a means of through travel, yes. Of course, there are other reasons why that construction hasn't gone forward, not because there is no scenery.

Q. Why haven't they constructed over there where rail transportation isn't afforded and expended their money over here in western Oregon and on the Columbia River?

A. As to western Oregon, the law requires the expenditure of a certain large percentage on this side of the mountains. As to central Oregon, no construction on the central Oregon Highway, for instance, because the money was being concentrated on the Dalles-California. It is now that we have finished the
828 Dalles-California that we are turning to the central Oregon.

As to the Fremont, the highway commission has until last year declined to do anything there because of the uncertainty as to possible railroad routes and its desire to establish the line where it would give the best service with respect to railroad construction. It was only after the Great Northern decision that the location north of Fort Rock (1502) was determined. The highway commission thought the Fort Rock location was related to the Great Northern location. That was before I was on it, and I disagreed with them. I am, I trust, not using any position I have to promote the particular interest of the community where I live. Now, that the location is selected, we are securing aid from the Forest Service in building the line through there, and can go on with it.

It is my belief that these highways wouldn't be any considerable factor in the accommodation of traffic in a freight way.

Q. Now, don't they use those highways over there in eastern Oregon, and won't they use them, in the same way they do in western Oregon in the handling of freight?

A. What I call light freight. If you want carrying out 20 or 30 tons a day of soda ash, or large weights of hay or (1503) cattle—I call canned goods light freight as distinguished from commodities like hay.

Q. Now, it appears from the record that as far south as Roseburg and farther south, canned goods packed here in the Willamette Valley are taken by truck to Portland for shipment by water. Now, you are familiar with the trucks that they operate on the Pacific Highway through the Willamette Valley and on south clear to the California line, are you not, judge?

829 A. Yes. They are coupled up tandem. I think they present the appearance of small box cars on rubber, and do really function in a very important way in the handling of the freight business of the country.

As to the limits to the trucking load that obtain, for instance, on the Pacific Highway, I don't remember the exact figures, but they have to do, as I remember, with the width of the rubber tire. We have our solid tire and pneumatic tire regulations.

Q. And if they can comply with that tire requirement, why, (1504) load and vehicle run up to some 16 or 18 tons, do they not?

A. I don't know that. I would take your word for it. I think that sum is a little high. Of course, that is on hard surface at all times. The commission frequently reduces the load limit on macadam roads during the winter time. None of the central Oregon roads are hard-surfaced. The road from Bend to Klamath is not hard-surfaced. It is an oiled macadam. The road in the John Day country is not hard-surfaced. There is no hard surface in eastern Oregon except on the old Oregon Trail and the Oregon-Washington Highway in the vicinity of Pendleton, if my memory is correct.

Redirect examination:

All the freight out of central Oregon, I would say the most of it is long distance, heavy freight, lumber (1505) chiefly, potatoes, livestock and some hay.

Recross-examination:

I mentioned the attractive feature of taking this Bend traffic east across the cross-State line, particularly as far as
830 the O. W. R. & N. operation was concerned, to the end that it would be delivered on a shorter route at Ontario than via the present route. Lumber is practically all there is there, from a traffic standpoint, for long distance movement.

Q. Now, I suppose in this cross-State line, as far as the Bend operation is concerned, you would consider the absorption of the investment of the O. W. R. & N. in its line up the Des Chutes?

A. Of course, we feel that there was unfortunate and unnecessary duplication of investment in the Des Chutes. The companies themselves have been absorbing as they have torn up the tracks in some sections there and consolidated. (1506.) Whether or not the commission would feel it was necessary to carry that to its end——

Q. Now, you say "the companies"—you mean by that the fact that the Oregon Trunk, that built up there at the same time that the Oregon-Washington Railroad & Navigation Company built up there, has abandoned some 28 or 29 miles of its original construction; that is all that has been abandoned, isn't it?

A. I believe so, yes. I think there is joint operation there, now, substantially half the distance of the Canyon from the Columbia River to Bend. The companies as between themselves that are in that joint operation are committed to very definite and substantial contracts over a long period of years, naturally.

Q. And the obligations they have to pay. You know that the Oregon-Washington Railroad & Navigation Company, for instance, operates on 40 or 50 miles of the Oregon Trunk, and the Oregon

Trunk operates on about the same mileage of the Oregon-Washington Railroad & Navigation Company?

831 A. I take your word for that. I don't know the distance. I know that there is substantial mileage there used one (1507) company by the other. I assume those obligations will continue. If the Oregon-Washington Railroad & Navigation Company would build from Bend across the State to Ontario it wouldn't avoid its existing obligations.

Q. In other words, it would have no necessity or use for any line, either jointly or individually, in the Deschutes Canyon, that is true, isn't it?

A. Shipments originating in Portland, if the line weren't built to the northwest from Bend, would have to come up the Deschutes Canyon. I am not thoroughly familiar with your lines, but any diversions north of Pendleton, I assume, would still go down the Des Chutes. Bend does not have very extensive relations with eastern Washington territory and Spokane.

Q. Now, you are so familiar with this area at Bend, and there was one question I think that the commission would be much interested in, and I should have asked it before, but it is with respect to the timber supply for the Bend mills. Those (1508) are large milling institutions, aren't they?

A. They are, yes. They involve many millions in investment. As to how far south they will go along the east slope of the Cascade Mountains for their timber supply, the Shevlin-Hixon Company or affiliated companies own timber 50 miles or more south of Bend which it expects to mill at Bend. The Brooks-Scanlon Company is already, I think, that distance south of Bend, to the east, with its logging road. Whether or not they will go beyond that I don't know.

By highway from Bend to Klamath Falls it is about 150 miles. The Klamath Falls mills will be as large operators, in the

832 aggregate, and probably a little larger, than the Bend mill when Weyerhaeuser gets going in Klamath Falls, but at present the Klamath production is only a very small amount more than the production of the two Bend mills. There is only a few of the Klamath people who own their (1509) own timber. They buy logs down there, and they are getting logs now on the Great Northern up in the vicinity of Crescent, and, of course, in the whole timbered area around Klamath Falls. The Pelican Bay Lumber Company, and the Weyerhaeuser Company, and the Shaw-Bertram Company, through the forest, purchase their logs.

Q. The point I am making is that irrespective of the ownership of that timber north of Klamath Falls, it is a resource for Klamath Falls to call upon to continue its operations?

A. Not exclusively, if you mean that. It is a resource, an area from which they would draw their logs. The Bend people would draw theirs going south, but not exclusively. Klamath will come

north and Bend will go south. But each section has other territories in other compass directions from which to draw timber or lumber. I do not thing there is very much lumber between Bend and Klamath Falls that can not be marketed, manufactured into lumber, in one of the cities or the other. (151.0)

Without regard to supply, I would say there is no justification, on account of weather conditions, for a large milling operation in that pine belt between Bend and Klamath Falls at any intervening point. Assuming that the weather conditions permitted, there wouldn't be any justification only so far as you could secure your supply from the Forest Service, national forest timber, such as the Shaw-Bertram Company in their recent purchase near Corral
833 Springs. That is not far from Chemult. That is a pine stand, spinus ponderosa. The national forest area timber runs all up and down the east slope of the Cascades. It is being called upon by the operators at Bend and Klamath Falls. (1511.) You wouldn't want to operate a mill on the slopes of the mountains there. The logs would be hauled into Bend or Klamath Falls.

It is true that there is now being hauled, on the line that the Great Northern owns north of Chemult, logs to the mills in the Klamath center, a hundred miles or so.

Further redirect examination:

I think I heard the testimony of the witness from Lakeview, Mr. Nolte, concerning the possibility or probability of establishing a mill cite in Northern Lake County, in the vicinity of Silver Lake. (1512.) I think that would be possible, although possibly not the best use of the timber of that vicinity.

Q. Doesn't the territory there slope generally in an easterly direction toward Silver Lake?

A. The Walker Range of Mountains, which lies between the present Southern Pacific line and the Great Northern line and the Fort Rock Valley slopes on the east side to the east.

Q. And if it is the policy of the forestry officials of the United States Government to require the milling of forest reserve timber within the county in which it is located, it is reasonable to suppose, is it, that some of the timber of Lake County would be milled where Mr. Nolte suggested?

A. Yes.

834 Further recross-examination:

I think the ownership of the mill at Bend extends into Northern Lake County. They expect to mill some of that Lake County timber right up to our place at Bend. (1513.)

Comr. McManamy. There has been considerable testimony in this case with respect to the rate of production of timber and its development in Oregon as compared with Washington. In your judgment what is the reason for that taking into consideration the fact that the testimony also seems to be that within the last few years there

has been no car shortage that so far as the lines now within the State are concerned they are efficiently operated and render service? Is it a question of reserving large timber supplies for certain mills or certain communities or is it a question of the need for competitive service or is it a question of the lack of branch line or feeder service? In your judgment if you care to express an opinion on the particular question as to why that condition which apparently does exist should exist what is back of it?

A. Well so far as Washington is concerned I would say that their timber development, logging, milling, sawmilling development, has been largely fostered and created by the transportation facilities afforded by the water of Puget Sound to which their logs are very easily transported. In the central port of Washington I am not familiar, although it is my understanding that the sections there of an irrigated country have been largely aided in their (1514) development by transportation, and I would say that this portion of Oregon here would have been benefited by transportation. I think
835 competitive conditions in the Willamette Valley have not been possibly what the public interest would most desire, but in central Oregon I believe we would have had greater development with a cross-State line. I am not sure that that is responsive.

Further redirect examination:

Q. (By Mr. DeArmond.) If the transportation facilities had been provided, say, 10 or 15 years ago, in your opinion (1515) wouldn't the State, that section of it, have been very much more developed than it is now?

A. I think so. Perhaps I should have answered you that way. (1516.)

L. K. Cramb was thereupon produced as a witness on behalf of the Bend intervenors, and, having been duly sworn, testified as follows:

Direct examination:

I live at Bend. I am secretary of the chamber of commerce at Bend. I have held that position three years. As secretary of the chamber of commerce at Bend it has been necessary for me to familiarize myself with the resources of the county and central Oregon communities; and of the transportation requirements. (1517.) Bend has a population of 10,000. Deschutes County has a population of about 16,000. I am appearing here for the city of Bend and the Bend Chamber of Commerce.

The general opinion in that county as to the building of the cross-State road as proposed is that it would aid in the development of central Oregon.

I have prepared an exhibit to be used in this hearing. That
836 is the exhibit. Those are all mimeographed copies, all the same. (1518.)

(The document so offered and received was thereupon marked "Interveners' Exhibit No. 24, Witness Cramb.")

Ordinarily as this exhibit is prepared I think it explains itself. That is the intention.

Page 8 shows the distribution of the lumber shipments going out of Bend as to destination. It shows the shipments for 1927 of cars by States. An analysis of this is given on page 9, which shows approximately 60 per cent of the lumber shipments from Bend go east of the Mississippi River and that nearly 19 per cent are along the lines of the Union Pacific, which, together with the shipments east of the Mississippi River, would be brought approximately 200 miles nearer Bend by the construction of a cross-State line from Bend to Crane. All of the lumber shipments out of Bend for the year 1927 are shown on page 8. This, by the way, is lower than the shipments for the two years preceding, and lower by (1519) possibly three or four thousand cars, than those this year will be. The showing for this year shows an increase over last year so far—almost a 50 per cent increase. That is shown on page 9.

I think the O.-W. handles about 40 per cent of the cars originating in Bend, and the Northern lines about 60 per cent. That is my recollection. As to how the 40 per cent moves, I haven't separated that as to the two trunk lines. I would have to go to the records of the two companies to get it. I could furnish it; if it is material I will get that for you. I will say this, however, Mr. Examiner: That the two (1520) lines are on a parity to Chicago, and shipments east of the Mississippi River, and it is about the same distance over
837 the Northern lines as it is over the Union Pacific at present.

As to where this 40 per cent of the shipments go that are originated by the O.-W., I am going back to Bend in the morning and I can furnish it to you.

I have a map of the United States showing those lumber shipments. I didn't intend to insert it as an exhibit, although it may be done, if you insist, if you want this. This map here shows the distribution of 1927 [exhibiting map]. It is the only map I have. (1521.)

I have a map prepared by me showing the shipments by cars, and the destination as to States from Bend. I have that map with me. The same information is also shown on page 9, in the analysis. I got my information concerning those shipments from the two lumber companies in Bend. (1522.) That is the Shevlin-Hixon and the Brooks-Scanlon Lumber companies.

As to page 10 of my Exhibit No. 24, under section 2, under the head of paper pulp: The use of western yellow pine and lodgepole for the purpose of making pulp and paper has been investigated thoroughly by United States Forest Laboratory at Madison, Wisconsin, and also by engineers for the Brooks-Scanlon Lumber Company, and it makes a very fine quality of heavy kraft paper, useful for wrapping purposes and for bag purposes, where great strength is required. As shown on page 10, Brooks-Scanlon Lumber Company went into this quite in detail two years ago, and I understand

still have under consideration the feasibility of establishing a pulp mill in Bend of approximately 200-ton capacity, daily capacity.

Q. On that same page you go into the question of agriculture and livestock to some extent. Taking into consideration the report
838 of Mr. Teutsch, I think contained in exhibit 1, what would you say as to the figures given by him as to the amount of tonnage that will go over the new proposed road?

A. His figures on clover seed and sheep and wool were very conservative, and he did not mention turkeys and eggs at all. (1523.) Two years ago no clover seed were shipped out of central Oregon. Last year four cars, of which I think three cars went east, were shipped. This year it is estimated six or seven cars will go out. It is entirely probable that within five years the production will be greater than Mr. Teutsch estimated.

As to sheep and wool he does not estimate any increase during the next five years, and I think with the increasing number of acres being brought into cultivation and the increasing number of farmers who are raising farm flocks of sheep, that that will be increased quite materially.

Three years ago it was necessary to import eggs into Bend for local consumption. During the past 12 months seven cars of eggs were shipped out, all of which went ultimately to the East. The central Oregon country seems to be peculiarly adapted to the poultry industry. Those who have investigated, men from the State college, say that it is better suited than is the Petaluma district in California, and we ultimately expect that shipments will increase rapidly.

On page 10 is mentioned turkey shipments, which Mr. (1524.) Teutsch did not consider. Three and a half cars went out last year, six to eight will go out this year. The market for turkeys is entirely in the East.

As to page 11, under the head of diatomite: There is some mined there at the present time. There is a mine at Lower Bridge,
839 west of Terrebonne about 25 or 30 miles from Bend. At the present time, according to the managing director, they are shipping out about 10 cars monthly. The manager of that concern expects the car shipments to increase quite rapidly. Diatomite has been commercially used only about 15 years. Fifteen years ago 40 cars were consumed in the entire United States, and last year 10,000 cars were shipped from the various mines. The mine near Bend is of a very high quality diatomite, very white and pure and fine and light. That mine is being operated now. (1525.) The managing directors says that 90 per cent of this is used in the East and will go East.

I think the mileage tables set out on page 12 are self-explanatory. They have been pretty well checked. On page 12 they show the distance from Eugene to Granger, St. Louis, and Chicago, showing the saving the line proposed by the public service commission would make to Chicago over present lines, and also the saving from

Eugene going to Bend and on that line to Chicago. The distance from Eugene to Chicago would be about 36 miles farther going by the Bend line. This, however, will be reduced three or four miles by the construction of about 12 miles of road from Bend south and the abandonment of part of the Shevlin-Hixon logging road, which is very circuitous for that distance.

On page 14, at the top of the page, is shown saving in mileage from Bend in the construction of a line from Bend to Crane. I think that is self-explanatory.

On page 15 is given the elevations, as far as we are able to (1526) get, between Bend and Crane, showing that it is not a difficult country in which to construct a railroad as compared with the elevations below, over the Blue Mountains, which are not
840 only high but quick ascent from one point to another. In other words, it is not only the question of saving in mileage that should be taken into consideration, but the saving in cost of operating the train over that given mileage.

As to the accessibility to the timber lying between Prineville and Burns if this route were selected for the construction of a cross-State line: The timber in what is known as the Mora Mountain section, that is part of the Ochoco timber, south of the Ochoco timber, amounting to about a billion feet, would be 15 or 20 miles from the line. The timber in the Ochoco Forest north of the Crooked River Canyon would be 10 or 15 miles farther, which is less than either one of the companies in Bend is now going for timber.

When I said that the lumber mills at Bend to Chicago were on a parity via the Union Pacific system lines and the Northern lines I meant the distance and not a rate parity. (1527.)

Q. On page 1 of your exhibit, in your introductory statement, it is said that, "A railroad from Bend to Crane offers all the advantages of a road from Crane to Crescent Lake and will serve the State better." Does your testimony, giving the views of the interests for which you speak, contend here only for the construction of a railroad from Crane to Bend?

A. The ultimate destination to Albany. That should be taken into consideration, I think. At the present time Bend and people for whom I am speaking, are interested in merely the construction of a line of railroad from Crane to Bend. That would not serve the same purpose as the Oregon commission's proposed line, which would connect Crane with the Southern Pacific line's Natron cut-off. And Bend could also be connected with the Southern Pacific's line at Crescent Lake. There is a road now from Bend south.
841 Q. But that further connection from Bend over to the Southern Pacific is not part of what the interests for which you speak are advocating here? (1528.)

A. In order to serve the western part of the State, that would be necessary, or the building of a line from Bend to Albany. The construction of a line from Bend to Crane would serve our interests.

Q. Now on page 9 you have a paragraph analyzing these lumber shipments from the Bend mills east. I note that a great proportion of those shipments move to points on and east of the Mississippi River. What importance, if you know, do the lumber mills and the people engaged in the manufacture and shipping of lumber from Bend, in the light of the long distances to which lumber from Bend moves to market in the East, attach to a possible shortening of the routes for the movement of this lumber and a lessening of the time in transit?

A. The retail lumber yards at the present time order their lumber more hand to mouth; that is, they order as they need, and a shorter route would be of valuable assistance to get that lumber.

As to whether the lumber mills at Bend, in shipping into the eastern markets, are there in competition with any other lumber producers nearer those eastern markets than Bend is, would say the southern production is nearer, but that is being rapidly exhausted. It is the opinion of the managers of the Bend mills (1529) that the eastern market will consume more western lumber in the future than it has in the past.

On page 12 I have stated that the saving in distance to east-
842 ern points via the public service commission's proposed line is 36 miles less than via the Bend line to the same points. In making those computations I used the distances from folders of the different companies and from Crescent Lake I used a distance of 24 miles to a point about 41 miles south of Bend on the Great Northern, and that was furnished to me in a letter by Mr. Corey to the editor of the Bend Bulletin as an alternative route. Over to Crane I used the distance 41 miles from a point south of Bend and then the Bend line over. On the Bend line over I showed a distance of 157 miles. I think Mr. Newell states some place that the distance would be 35 miles farther by Bend. I saw that came (1530) out in the testimony here somewhere. Is that right?

Q. I have just made a computation from the map. The figures on the map indicate that the distance would be 42. However, it is a fact that the line via Bend to eastern destinations would be 36 or 42 miles, whatever the correct figure may be, longer than the distance from Crescent Lake over to Crane?

A. Yes; originating at Eugene. On the other hand, the heavy traffic would be from Eugene east, not the other way, and it would be on a down-grade haul from Crescent Lake to Bend, which would make some difference.

In view of greater tonnage near the Bend line, and the fact that the Bend line offers a shorter route from Albany, I think the Bend line would serve the purpose as adequately as the route suggested by the commission. Eugene is not the only town to be considered in Oregon (1531) in building a railroad.

843 Cross-examination:

Referring to page 2, estimates on farm values, land alone, and buildings. The estimates in the first two columns were taken from the Federal Government records, and the third column is based on estimates the county agent and I gave. I think there has been $400,000 worth of construction there from January 1st, 1925, to January 1st, 1928.

As to the estimate farther down in regard to wheat, that is, 36,000 bushels for 1928 and 10,718 bushels produced in 1925: Those are figures that we obtained from estimates by the county agent, and he is familiar with the wheat production in Deschutes County. Since 1925 the wheat acreage (1532) in Deschutes County has increased about 500 acres. That is one of the county agent's estimates. (1533.)

Q. (By Mr. SPENCER.) Now, you produced on 1,166 acres of wheat in 1920, by the Government returns, 14,684 bushels. The county agent estimates production of 1,200 acres or only just 34 acres more, he expects a production of 36,000. Now, what is that?

A. The production in 1920 was largely on dry farming east of Bend, a very small production per acre, while the production in the year 1927 was largely on irrigated land, with a high production per acre.

A part of the hay production in 1919 was on irrigated areas. To my knowledge we never had any hay production up there on dry farms. I don't know.

Q. And, as a matter of fact, your acreage shrank from 1920, from 24 or 25 thousand to 19,000 in 1925, and you shrink it again in your estimate for 1928, yet you have got your production from 18,000 in 1928 estimated at 54,000 tons, whereas on 7,000 more acres in 1920 you only produced 36,000 tons.

844 A. I think that is correct. The production per acre has been increasing there. (1534.) It is a better method of farming. That is only 3 tons to the acre in 1927, and that isn't a high production for alfalfa hay. McDonald, the county agent, gave me his estimates. We went over them together.

There has been such an increase in acreage in potatoes. We have been a potato shipping section for years. I have only been there for three years, and they have shipped potatoes during the time I was there.

Q. But you shipped potatoes amounting to about 80 or 85 thousand bushels, from 1920 to 1925, but here (1535) you have it estimated for 1928 that you are going to ship out 410,000 bushels.

A. That is not what we are going to ship out. That is the total production. I think that is correct. There was a very large acreage of potatoes last year, and an equally large acreage this year.

Q. But you have got more than twice the production to the acreage. You increase the acreage a hundred per cent, and then you in-

crease the production more than 200 per cent. Does that impress you at all?

A. There has been an increase in the production per acre.

Q. There hasn't been any increase of over 200 per cent, has there?

A. I don't know whether this shows that. I haven't figured it up.

The irrigation projects up there are all tributary to Bend. The central Oregon irrigation district has 9,804 acres in Crook County out of the 48,549; the rest is in Deschutes County. The proj-
845 ect that there was so much trouble with (1536) over there in the leakage of the reservoir is the project just below that. That is the Tumalo—the Deschutes County municipal improvement district, the second one on the list. That is operative; about 6,500 acres now in cultivation. They raise on it the same as on the other projects—alfalfa, clover seed, potatoes, and some wheat. They are not dependent on that so-called leaky reservoir for water.

Q. They have got irrigable acres, 15,000, if they can get water for it, is that it?

A. They have water for it.

Q. They have been there for years and have only got 6,500 acres of it in cultivation?

A. That is a question of colonization, not a question of water.

The Deschutes reclamation irrigation district is immediately north of Bend. The Arnold irrigation district is south and southeast of Bend. It adjoins Bend on the southeast there. (1537.) The water rights on the Arnold district are now up to the Supreme Court for adjudication. The whole river is under adjudication, but that applies to that. There are about 2,000 acres of the Arnold irrigation district in cultivation.

The Squaw Creek irrigation district is northwest of Bend, up near Sisters. That is all privately owned and all under cultivation. I think that is a State project. I wouldn't be absolutely certain as to that.

The Snow Creek irrigation district is between Bend and Sisters. About 1,100 acres of that are under cultivation. There are enough settlers to cultivate those 1,100 acres.

Q. Free water rights, number of acres, 7,000—where's there (1538) any free water rights over there?

846 A. Well, there are a number of farms over there watered from springs, and so forth. These are all within a short radius of Bend. They are accessible by highways. They are now enjoying service by three transcontinental railroads. I think there is a truck line operated there to Portland. I am not sure as to that.

I think timber holdings further south than Crescent are held by the Bend mills, that they manufacture at Bend.

The forest timber I referred to there that is accessible for Bend, some of it is west of Bend (1539) and some is southeast of Bend. Timber in the vicinity of Paulina Mountains is southeast of Bend.

I think there is some southwest. There is some national forest timber southeast of Bend.

Q. Now, you have in this classification pretty near a billion feet in lodgepole pine; that is what they call a black pine, is it?

A. I don't know what they call it. I expect they call it lodgepole. It is a very tall tree. I think probably the principal use of it would eventually be in the manufacture of pulp. (1540.) They are not using any of it now. Most of the lodgepole pine is in the higher areas.

Q. Now, a cross-State line, referring to this timber over here on the slopes and on the ridge of the mountain west of Prineville and west of Bend, I notice on page 7 you refer to the Ochoco National Forest, approximately 5 billion feet, that wouldn't be served by a cross-State line as located by the petition in this case, would it?

A. Not directly by the public service commission proposed line, no. The Mora Mountain timber would probably be 10 or 15
847 miles from it, and the other timber possibly 25 to 50 miles. (1541.) If we get as close as we can to the base of the mountain on the line between the desert and the mountain we will be a full 50 miles from the heavy timber on the ridge of the Blue Mountains along there. I couldn't say if it would be more than that. It is considered a rugged country, the Ochoco region.

Q. I mean, you would have a big drop from that location down to your proposed railroad?

A. I don't know what you would call a big drop. A railroad there at an elevation of about 3,600 feet along in there.

Q. And at the top of this is about 5,400 or 5,500 feet, isn't it, the top of this mountain there, where the timber is?

A. I don't think they would get a great deal of timber right on the top of the mountains. It would be all down on the slopes, at the various levels. The top of the mountain is not the heaviest timber at Bend. As to whether it is on the ridge east of Prineville, I couldn't say. I have never been there.

Q. Well, as a practical matter, this cross-State line, the public service commission line, as it is conceived, to serve the pine forests east of Prineville wouldn't be very helpful in that direction, would it? (1542.)

A. It would be helpful in this respect—it would make a closer connection to the East than the present line, of the manufactured timber. That is true as far as a logging operation is concerned.

Q. You could get into this Ochoco forest from Burns to-day with practically as short mileage as you could from the location of the cross-State line to Crescent?

A. The road from Burns to Seneca, as I recall, is 50 miles; that is straight east of Prineville.

848 Q. This estimate here for agriculture and livestock on page 10 contemplates moving it across that State-line, does it?

A. The market for clover seed and sheep and wool will move across the cross-State line. The market for clover seed is in the East. It moves out over the railroads that are in there now. (1543.) The sheep move to the Idaho range. They would go the cross-State line. I think most of the wool goes to the eastern markets. As to whether all the wool in that country has been coming down into the wool pool at Portland for several years past and moved out by water, I couldn't say as to that. We haul diadomite about six or seven miles to the railroad now. I don't know the specific points where it is shipped. It is shipped wherever there is a demand for it. Mr. Kreiger, managing director of the Diadomite Corporation, gave me the estimate of 10 cars a month. He says the present shipments are approximately that. (1544.) He says 90 per cent go East. As to whether they ship them to Portland and send them East by water, I couldn't say as to that. I have heard that there are other diadomite deposits in the State and some in California. I understand there is a deposit at Harper, on the Oregon Eastern, which isn't pure and not as light as the deposit at Terrebonne, and not as great a demand. The people that operate that don't like to admit it. I don't know whether or not there are a lot of diadomite deposits over in Idaho. I don't think there are a great lot of those deposits. I couldn't say. I know there is a deposit in California. I don't know (1545) where.

This commodity is used for infiltration and insulation. The more recent use and the more extensive use is in concrete. It
849 adds to the strength of the concrete, and by the use of diadomite with concrete it isn't necessary to use so much water, and the pouring quality of the concrete is increased. It seems to pour easier, and then the ingredients don't separate as much in concrete. I understand that quite a large quantity of diadomite is used in the wall here in the port of Portland. Is is also used to some extent in plaster and mortar.

That deposit is north of Bend. There is no reason why it couldn't operate at all periods of the year. If there isn't a market demand for it it won't operate, but the demand is increasing, particularly in the use of concrete. I don't know for a certainty whether it is operating all the time of not. (1546.)

Q. On page 15, these distances, I don't know as I know what you mean here, "elevations over Blue Mountains," and then you have got "distance to next place." Sherman is 170, Arlington 225—those are elevations—and the distance, I assume, from Sherman to Arlington——

A. 36 miles. That is 170 at Sherman, the elevation above sea level. I start my calculations at Sherman. We start to climb a mountain at Pendleton.

Referring to page 2: The great amount of agricultural products would be loaded at Redmond, in Deschutes County (1547), which is 18 miles north of Bend.

Referring to page 12: When I say with reference to distances to Chicago—taking the item where it says 36 miles over public service commission line, that is calculated from Eugene. You see at the top of the page there that's the figures from Eugene; that's the distance.

Q. Well, in computing your saving on Bend shipments going east by the various routes, what did you base the calculations on
850 as to the cross-State line as proposed in this case?

A. I believe that is the line proposed by Bend, from Bend direct to Crane, 157 miles. On the public service commission proposed line we computed the distance as going from Bend to a connection with the cross-State line and then east. (1548.)

M. B. BERGSVIK was thereupon produced as a witness on behalf of complainants, and, having been first duly sworn, testified as follows:

Direct examination:

I reside in Portland, Oregon. I am car distributor, Chevrolet Motor Company, for the northern part of California, all of Oregon, western Washington, and western Idaho. I have held that position five years. In the distribution of our cars to eastern Oregon and southwestern Idaho, they are shipped from Melrose, California. The cars are assembled in Melrose and shipped to the dealers. I estimate 500 carloads will be shipped annually into southwestern Idaho and eastern Oregon. (1550.)

As to the routing of railroad cars of automobiles, the routing is all handled with the traffic department in Oakland, but the company that gives the best service, and the rates naturally are the same, and furnish the equipment and saving of time, it is more natural that they get the business, but they always try to give all the roads a proportion of the shipments going into that part of the country. We ship now into southwestern Idaho from Melrose to Portland and from Portland through. I don't think we ship any by way of Ogden, nor any by the famous Rogerson-Wells cut-off. It takes about eight days to ship a car from Melrose, Calif., to Boise. Melrose
851 is six miles out from Oakland. It is where the factory is located. (1551.)

Cross-examination:

Our cars come through Portland and East Portland for this eastern Oregon territory. The diverting and routing of the cars is handled by the traffic department in Oakland.

I do not know where the territory divides in southern Idaho as between Portland and as between the Central Pacific service, but I think it is outside of our territory. I think it is east of Glenn's Ferry. I know when we had the Montana territory we used to ship over Ogden into Butte, that way but that is about the only one I think that we did ship. We shipped from Oakland up through Pocatello and up to Butte that way. (1552.)

We ship around 40 cars of automobiles a year into Crane and about 60 or 70 into Burns. We put four automobiles in a car.

Q. Now, there wouldn't be any inducement or help to you or your company or to the shipper if the rate was the same to those destinations in eastern Oregon and southern Idaho, would there?

A. Well, if the route is so much shorter, it would, yes; and the rates are the same.

Q. Well, does the shortness of the route always determine the time consumed in going over it?

A. That is what I mean, time would have to be taken into consideration, also, you know.

Q. You would go by main line operation in preference to a branch line operation, wouldn't you?

A. Whatever makes the best time. Now, you see, anything like that would have to be handled by the traffic department, you know. (1553.)

852 Q. If you didn't get a lower rate to Ontario, for instance, via this cross-State line, or if the other rate was lower, the other route had a lower rate, why, you would ship via the other route, wouldn't you?

A. That is what it seems to me; yes, sir.

Those 500 carloads that would move into southwestern Idaho, that will be from August 1st up until August 1st of the next year. I couldn't give an estimate of what percentage of those 500 carloads would move over this proposed line. Now, there might be more than 500. I am just giving you an estimate of what I figure would go in there. If things are going like they are now there would be more than that. That includes Ontario only. That is right beyond the line there. Leaves off Glenn's Ferry and takes in Burns and Crane. (1554.)

W. H. DOOLITTLE was thereupon produced as a witness on behalf of complainants, and, having been first duly sworn, testified as follows:

Direct examination:

I reside at Ontario, Oregon. I have been secretary of the chamber of commerce over there for the last seven years, and mayor. In appearing in this case I represent the Ontario Commercial Club. The Ontario Commercial Club is an intervener in this proceeding. In connection with my work as secretary of the commercial organization I represent, I have become familiar in a general way with the territory surrounding Ontario and with the irrigation (1555) projects and the production of my section of the country. I have prepared a statement dealing with certain matters here, that I think will partly assist the commission.

853 I have been a resident of Malheur County, Oregon, since June, 1907, and have lived here continuously with the exception of about two years. Since 1921 I have been the secretary of the Ontario Commercial Club and mayor of the city of Ontario.

In 1902 the United States Government commenced surveys to (1556) build what was then called the Malheur irrigation project, covering most of the lands now embraced in the Vale and Owyhee Government irrigation projects which are now under construction. About $75,000 was spent by the Government for investigations and surveys, but due to many different causes and misunderstandings between the Reclamation Service and the land owners, the Government withdrew from the field about 1904. In 1908 another effort was started by the people here to get the Government to build this irrigation project, and a promise was secured from Mr. R. J. Newell, then head of the Reclamation Service, that if 90 per cent of the land owners would sign an agreement to include their lands to take water through Government sources that they would revive the project. Several thousand dollars was raised locally, and after a campaign lasting about a year 95 per cent of the land owners were signed up.

Engineer Paul, who built the Arrow Rock Dam, was sent here with a large force of men to complete the old surveys and prepare reports. During this period hundreds of new settlers came to this country, and practically all of the land under what is known as the Vale and Owyhee projects were homesteaded or taken under desert-land entries. These men settled on these lands on account of this assurance from Mr. Newell that the Government project would be built. Thousands (1557) of dollars were spent by 854 settlers in building homes, fences, drilling wells, and clearing off sage brush from many thousands of acres of land. In order to secure title their families were required to live on these homestead lands for five years.

The Owyhee irrigation district was formed, and good progress was being made when the Trowbridge Niver Bonding Company of Chicago sent in a large force of surveyors and announced that they were prepared to irrigate the lands now covered by the Owyhee project, amounting to approximately 150,000 acres. They stated that the Government was making a failure of irrigation projects, were slow in building, and that private irrigation was more successful, and that the Government should not undertake to build any reclamation projects where private companies desired to do so. Several months later, Secretary Ballinger of the Interior Department, came to Ontario and announced at a public meeting that the Government had no funds to build and would withdraw from this section. The Trowbridge Niver Company then agreed to contract with the land owners to furnish the water for these lands at about $63.00 per acre. Within less than a year the bonding company of Trowbridge and Niver of Chicago failed, and these settlers were left high and dry again.

In 1919 and 1920 the Oregon Legislature and Congress each made an appropriation of $5,000 for making investigations (1558), sur-

veys, and a report on the feasibility and cost of the Owyhee irrigation project. This report was completed in 1921. After a five-year struggle, during which over $20,000 was raised and spent by our local people, the Owyhee and Vale projects were both duly approved.

The Owyhee irrigation project has a net acreage of 139,560 acres, 43,568 having been rejected as nonirrigable, due to
855 being considered too rough, poor soil, or lacking drainage. 80,960 acres is new land, never having been irrigated before; 46,000 acres old land in pumping districts, and 12,000 acres under the Owyhee ditch which receives a partial water right.

The total cost of the Owyhee project is estimated $17,715,000. The estimated number of new settlers needed for the new lands is given as 1,500. Up to date Congress has appropriated $4,315,000, and another appropriation is expected this winter. Work is now under way on the Owyhee Dam and this project should be finished in 4 to 5 years, some units possibly getting water a year earlier.

The Vale irrigation project comprises some 28,350 net acres, and is estimated to cost $3,587,300, of which about 3,570 acres has a partial water right, leaving 24,780 acres of new land. The number of new settlers required is 577. Up to the present time Congress has appropriated $2,100,000 for the construction of the Vale project, and another appropriation is expected this winter. (1559.) Work has been under way for about a year, and the Harper unit and probably all land west of Bully Creek, amounting to approximately 9,000 acres, should be ready for water by the spring of 1930, and the Vale project should be practically completed by the spring of 1931. The above figures are principally taken from the 1925 report of the Department of the Interior, Bureau of Reclamation, reports on the Kittitas, Owyhee, and Vale projects.

The Black Canyon project, located just across the river from Ontario and Malheur County, has some land within three miles of Ontario. I quote the following letter from Mr. R. J. Newell, superintendent of the Black Canyon project, with the following facts about this project:

856 "BOISE, IDAHO, *July 26, 1928.*

"Mr. W. H. DOOLITTLE,
Secretary, Ontario Commercial Club,
Ontario, Oregon.

DEAR MR. DOOLITTLE: "Acknowledging your letter dated July 24 in regard to the Black Canyon district, I am offering the following data:

"The irrigable area of the new lands in the district is about 48,000 acres. The gross area is more than 70,000. The total estimated cost of the project is about $7,000,000 (1560) of which the Black Canyon district's share in the dam and power plant at Black Canyon which has already been expended is about $1,140,000. Your impression as to appropriations available is correct.

Yours very truly,

R. J. NEWELL,
Superintendent."

In my letter to Mr. Newell I stated that I understood that one appropriation of $400,000 and one of $500,000, or a total of $900,000, had recently been made by Congress and was available at this time. He stated that this is correct.

Assuming that the Black Canyon project will need the same amount of settlers per acre as the Vale project, it will require about 980 settlers for this new land.

The estimated cost of the three above projects is approximately $27,000,000, and about 153,740 acres of new land will be added to this particular section. In addition to this, a partial water right will be supplied to over 60,000 acres, which will probably increase
857 the production of these lands 25 per cent. 153,740 acres of new land is a net acreage of carefully selected bench lands of the highest soil capacity, capable of producing as much as the average 200,000 acres now under irrigation in this valley. These lands will require not less than 3,000 (1561) families, and add probably 12,000 people to the population of the county.

The annual report of the commissioner of reclamation for the fiscal year ending June 30, 1926, page 138, says that on 25 irrigation projects the population of the farms is given as 136,872, and that there are 203 towns on these projects, and a population of 365,742 people.

Canyon County and Payette County have, according to the assessment of these two counties, about 179,000 acres under irrigation. Considerable of this land is rather poor quality, due to soil and drainage conditions. Last year these counties shipped about 8,500 cars of produce. So it may be assumed that within a few years the new lands will produce nearly as much tonnage as these two counties do. The addition of about 25,000 new people which will follow the irrigation of these new projects will also result in a considerable additional amount of freight to this section. (1562.)

Q. Right there, Mr. Doolittle, in speaking of the land in Canyon and Payette Counties, where you state that considerable of this land is of a rather poor quality, due to soil and drainage conditions, just what did you have in mind in making that statement?

A. In all Government irrigation projects that were built, like the Boise project, at the time the Boise project was built, it was
858 customary for them 10 or 15 years ago to add all of the land under an irrigation project. In other words, if your ditch covered 100,000 acres it was 100,000 acres and you were expected to pay for the poor land as well as the good land. Under these later changes made since 1922 or '23 the Government carefully goes over each tract or unit of these projects, divides it into 40-acre tracts, goes over each 40, and any land that is rough, any land that is alkali, any land that needs drainage, any land that has poor soil, is put in a non-irrigable class. In many cases there may be only five acres, there may be only 20 acres, there may be 30 acres, there may be any given amount that can be irrigated, or it is possible they might find

a 40 all good, but any land that they don't think can be successfully irrigated, or that will pay these charges, in their judgment, is taken out and put in a non-irrigated class. (1563.) I mean to say that in both Canyon County and in Payette County there is a considerable amount of land along in the bottoms that is under irrigation that is of poor quality; some gumbo, some alkali tracts that are irrigated and produce only normally about half to two-thirds what these bench lands do. In other words, the Government project is practically all bench lands above any previous ditches. The bench lands are in each one of these three projects. All of this new land is practically bench land. It lies above any ditches we now have in the valley. When I say the three projects I mean the Vale, the Owyhee, and the Black Canyon projects.

I am attempting to make clear a comparison between what the old conditions or already developed lands are and what the new will be.

I am attempting to show that the production of these new
859 lands will be 25 per cent, in other words, that is higher than the lands that are generally under irrigation; for some of the lands that are now under irrigation are just as good as any lands, but there is also included among them a lot of very poor lands, in Malheur County and in Payette in Idaho (1564), and in Canyon County.

As to whether I have been active in the development of these irrigation projects throughout their history, or a great part of it, I have been active in connection with principally the Owyhee project. Of course we are mixed up in the Vale project more or less. The Vale project seemed to have good backing. The Owyhee was a project that required to be fought from beginning to end, because the Owyhee was the biggest project ever asked of the United States Government in the way of an appropriation, and the bigger the sum of money asked the harder it had to be fought, and there were other districts in the State of Oregon, as well as many places in the United States, that wanted these funds. So it was a fight from start to finish. At the time the Baker project was under way Umatilla wanted money, the Deschutes wanted money in Oregon, and many other projects, of course, in other places.

It took us over five years to finally pass the United States departments at Washington and secure appropriations from the Government. In other words, we had to pass the test of having all our lands examined, and so forth, and then a final report made, even though we had already received an (1565) appropriation I think of $315,000 from Congress. It had to be approved afterwards again by the Secretary of the Interior. It has been a continual struggle

for over 25 years on our part to get these projects through.
860 We were able in Malheur County, the farmers and the people, to irrigate the lands along the bottoms, because that was possible. But the best land in all the irrigated countries that I know of in the west is the land on the benches above the bottoms. The

alkali and the poor land is always on the bottom. The easiest place of course in the world is to get the water on the bottom, because you can pump it, or you can go up a stream a few miles, 10 or 20 miles or so, and dig a ditch and reach these lands. But to reach lands 100 or 200 feet above the floor of the valley necessitates going back up some stream maybe 30 or 40 miles, building a big reservoir, holding that canal up maybe 250—the Owyhee Canal, as a (1566) matter of fact—Ontario is 2,147 feet, I believe; the canal runs up over 2,450 feet contour back of Ontario; in other words, it started about 2,500, and in the course of 40 or 50 miles the ditch's lowest part is around a 2,450-foot contour, so it is going to water land 300 feet higher than the town of Ontario. To do that required millions of dollars. We spent probably $25,000. Every land owner there that had any land was assessed for several years. It required the efforts of that community year after year to send delegates to Washington. We sent them to Denver; we sent them to Salt Lake; we sent them to Portland; we sent them to Boise many times. We kept a man in Congress every winter, sometimes three and four months at a stretch. We raised $25,000 or more through the various channels that were possible. The Ontario Commercial Club took all of their funds; we went to Boise and raised $500 once there; we went to Payette and raised $300 there; twice in one summer I walked down the streets and asked the merchants for a thousand dollars each time in addition to their regular contributions.

861 We believe our difficulties so far as our irrigation development is concerned are now satisfactorily adjusted so that we may go ahead and fully develop our country. The work is now under way. In order to make our country (1567) successful in the production and marketing of its products we actually have to have new settlers. Now the new settlers will be obtained. There is not any settlement project with us, in this way: The Government put on a price on those lands about one-half or one-tenth. I might say, almost, of what ordinarily and always before lands were considered worth in that country. In other words, they appraised this land at one to fifteen dollars an acre, or five to ten for the appraised land, averaging about $11.00 an acre. They gave the settlers 40 years, or do give them, in which to pay the Government their money back without interest, commencing the first payment in, say, December of the year in which they have an opportunity to get the water in the early spring. This is probably the most wonderful proposition from a settlement standpoint that I have ever heard of since I have been in the West.

I have had over 4,000 letters since last August inquiring about this project. Men are coming in every day, although it will be some time before the lands are watered. But I feel safe in saying that every tract will have somebody ready to farm it when the water is ready. If the water was ready two years from now, one-half the time, we would settle them, because of the fact that there has never

been such a proposition before. The old timers that came here 50
(1568) years ago had to take their families and live five
862 years out in the sagebrush. The old timer and his neighbor had to get together and go up that stream maybe 15 miles and start digging a ditch. It may have taken him in a good many cases three to five years to get that ditch down so as to water his land. He had to provide the bacon for his family during that time.

I recall one old fellow who told me during the period down there that about the only money he saw was when he got a little water from some source there and he hauled a load of beans to Boise, 60 miles away—it took him four days—and he got three cents a pound for them. Now that is what the old settler went through. The new settler—now practically all of that land in under private ownership, but the Government placed a price on it of less than $11.00. All a man has to do to buy a 40-acre tract is to get together that four or five hundred dollars cash to buy it, to go back to town and sit down until the Government announces to him that his water will be ready next spring, and to get busy. He doesn't have to have any money to dig a ditch.

Now in 1912 and in that time there was a bunch of us owned 6,000 acres of land, but before we could start that ditch we had to have $128,000 in cash, because we had to have the money to let the contract, but that money must be in the (1569) bank. It took six or eight months, and we were paying interest all the time before the ditch could be constructed. But to-day the man sits there until the Government tells him that the water is ready. Then in December of that year he is asked to commence paying back. So that he does not require a dollar in cash in advance to get his water, like we did in those days.

Another factor in the settlement of these new lands is this: That
I have made very careful estimates, in connection with the
863 charges for water. We have one 6,000-acre tract there, one of the most attractive in our valley, and I think the settlers under it are the most prosperous. They are paying $9.00 an acre this year for water. I have figured out what the new man will have to pay the Government in this 40-year period, and they will get water for irrigation of their crops for $4.50, one-half of what the man with the pump is. Now the fellows with the pumps are throwing away their pumps. They are asking the Government to come in exactly under the same condition as the new settler, and to pay just as much, because it saves them one-half.

As to whether or not these projects will be promptly settled, it is my judgment that every (1570) piece of land will have an owner, and that practically all of that land will go in at once, for the very good reason that those lands have to start in paying the first season. In other words, if a man does not put his land in he must pay $4.50, or whatever that charge may be, at once, so that will cause each and every man to do so.

As to how the lands in these projects that I have described compare in ability to produce with other irrigation projects of the West with which I am familiar, I think, with the exception of the Yakima Valley and the Wenatchee section, that there is not a district in the West that for diversified farming equals the Snake River Valley. The Snake River Valley from Boise to Weiser has separate and distinct climate from western Idaho, with the exception of the southwestern part. It is 1,500 feet lower than at Ontario, than the Twin Falls section, a longer season, equally as fine lands. So that it gives us a little longer season in there, and a greater oppor-
864 tunity to raise crops of fruit, corn, and such things as that, and a longer alfalfa season. Now I have talked with many men; I have been through the Yakima Valley many times in the past, and I believe in the range of crops grown, in the ability to raise crops, that there are no two sections as near equal in that respect. Yet to give you an idea of what is going to happen in our valley (1571), I am going to say this, and I take in all the region from Boise to Weiser on both sides of the Snake, including Malheur County, and there is probably to-day 600,000 acres of land in that valley. Now in Yakima they show that last year they shipped out over 37,000 cars of agricultural products from 328,000 acres now under irrigation, or about one-half as much land as is now under irrigation in the section covered in what we call the Snake River Valley, roughly from a point 10 miles above Boise to a point 10 miles above Weiser, on both sides and running from Emmett to what we call the main Snake River Valley. There is the junction of six valleys there. In that valley there are some six different streams: There is the Boise, the Weiser, the Payette, the Malheur, and the Owyhee Rivers, and the Snake. They are all there together. Within 15 miles from Ontario the five rivers join and the five valleys come down together, forming the one great valley, the Snake, which averages probably 10 to 20 miles in width and about 80 to 90 in length.

The climate, as a matter of fact, is much better in there than it is in the Yakima section, but the frost season and other things of that kind, there is not much difference. But there is this, that the crops are practically the same and very similar. I have talked with
865 a great many men (1572)—Mr. Van Patton, at Ontario, has a lumber yard at Sunnyside and lives at Ontario, and he thinks that the average of our valley, that is the Snake River Valley, is better than the Yakima. He has a lumber yard at Payette and Weiser. My opinion is that it is equally as good, and that the range of products is practically the same, and that they produce, according to the different reports I have seen, practically about the same amount per acre. The Snake River Valley in Malheur County, which is similar to the rest of it mostly, according to the Oregon Agricultural College survey made in 1925, shows the different districts, five different producing districts for alfalfa in Oregon. That showed that

Umatilla, Deschutes, and Klamath averaged about three tons per acre. The average in the Rogue River Valley district was given as 3.9 tons, while the average in Malheur County around in the Snake River Valley was 5.1 tons.

I brought that fact out to Mr. Ballard, the county club leader, that we claimed to raise more wheat per acre, more corn per acre, more alfalfa per acre, more clover per acre, more clover seed per acre, more potatoes per acre, and more apples per acre in our section than any part of the State of Oregon. He said, "I will tell you something else: The richest soil in the State of Oregon, chemically tested, comes from around Ontario." (1573.)

Now when we talk dairying and such things as that, all we have got to do is to get a good man from the O. A. C. and then listen to him and we might value our lands many times what we do, because our ability to dairy there with eight-dollar hay generally, and
866 blue grass pastures carrying two and a half to three cows per acre, probably almost twice as much as Tillamook carries, makes it a wonderful district for that purpose. There is an explanation, because we use practically 30 inches of irrigation water in our section in June, July, and August, and the total rainfall at Portland, Seattle, and Tacoma for the last 40 years only averages about three inches during those three months. Now it is my judgment this; just one thing more I want to say: Now one reason, there is a great region that has not been known. Why? Because the Union Pacific Railroad, for a great many years before automobiles got so prevalent, and before good roads, which has all happened since '21, you might say, or '22, were prevailing, that people came through our section over the railroad. The railroad through the Boise Valley traverses the bottom lands. Ontario is an alkali hole; at Nyssa, at Parma, at Caldwell, and considerable around Nampa. The bench lands are back a mile or two. The lands in many cases are not under cultivation, like, for instance, between Nyssa and Ontario, a distance of almost 12 miles along (1574) the railroad track, it is mostly greasewood. You can see the alkali. And the people traveling through there on the train wondered how people made a living in that country. Back from the railroad a mile on the benches was thousands of acres of fine orchards, of wonderful lands, but they could not see them. Lately I think the Oregon trail was built, in 1922 or '23, we are getting our system of roads fairly well distributed through there and now people are going through that valley and it has commenced to develop and they are going to see a wonderful development there.

At the present time our territory has very satisfactory
867 railroad transportation eastward, probably northward and to Portland, and to Los Angeles. But we, and the people there, want to get to the coast, to northern California. And when I say to Los Angeles, now I am going to take a little different tact here. If you have sold your goods in Los Angeles the present route is all right, but in the development of every new country there are some things

that are absolutely necessary. I am going to tell you that there are hundreds of people to-day coming from California up in there; I talked to 11, 12, and 15 before I left every day. One little ad of mine brought 2,500 letters from California. They are pouring in there. (1575.) I have been out with those fellows for the last six months, nearly every day with a man from California to show him that country and the things that are possible there. Now when he started out he said to me, "How many times do you cut alfalfa?" I said "Three times." "Well, down in California we cut five or six." "Yes, that is true; but we get more alfalfa in three cuttings than you fellows do in five or six, and it costs a lot more money to cut alfalfa five or six times." Before they left they realized that fact. I have been able to take them out to places, such as McConnell's out there, where his first cutting was 350 tons from 100 acres, the first cutting in June where he got seven ton, and I have even seen eight and nine there in the old days on the new sagebrush lands, because the new sagebrush land produces more alfalfa right from the grass roots during the first 10-year period than they will 15 years from now. Why I don't know, but something is lost from the soil, and they drop back a ton or two from what they will cut from the new sage-
868 brush land. And the Eastern Oregon Land Company of California showed me that for 1918 and 1919—they showed me their statement for two years on a 176-acre ranch they had, where they averaged for the two years 8.1 tons and 7.9 tons, actually what they sold off of that place of the hay. So that those were actual measurements. Many men claim they raise 10 tons there, but I can't verify that. (1576.)

Now these California people are going to be among the settlers there, and I believe in the majority. I might say that I could bring, and that I could get, if necessary, 1,000 letters every month for the next 12 months, if I had one hundred dollars a month to spend for advertising. I used a 13 line ad letter in the San Francisco Examiner, in the Los Angeles Examiner, in the Chicago Tribune and in the Kansas City Star, $100 a month in one Sunday only, every Sunday for four weeks. I had to answer 250 letters a week. I had to quit, because our revenues in that club are about $300 a month, and the advertising and answering those and the postage was costing me $600. It took two stenographers answering the questions those fellows asked me about that country, so I had to cut it down. But I say, all I had to do was to have $100 a month for classified advertising, but I had to have $500 more for stenographers, postage, and things like that. It showed what the people wanted and what they thought of these things. And, as I say, they are pouring into there a family a day, settling at Ontario, four or five coming in, and nine out of ten of these men say, "I am going home and sell out and come back. I have never had a chance like that."
869 Now I am getting down to this point here: These men are going to fill this valley. There is no reason in the world if

Yakima with 328,000 acres of land is producing (1577) 37,000 cars of produce, and when these new projects are finished we will have 700,000 acres or more, possibly 750,000 acres of that valley under irrigation—there is no reason why, if there is a market for it, that those men can't there produce 75,000 cars. And the point is that we don't know where we would sell it or ship it, and we don't know whether we will produce 75,000 cars, like Yakima, because the question is, where will we market it? And that brings us up to this matter of marketing. They say that the trade follows the flag. Marketing will follow this railroad. The fellow that comes from California—and I have had lots of them say, "Those are fine apples you have got," and things of this kind. "Yes." "Why don't you market it down our way? We get the same kind of apples. We think there ought to be a good market down there." Why these men see our fine potatoes and they say, "Gee whiz, why not ship some of these down in our town?" Now what is going to happen is this: The other day I saw where a man bought, I think it was 18 cows, up at Emmett, 30 miles from Ontario, for shipment to California, paid $125 for Holsteins. Californians come in there to buy cows; they come in to buy this and they come in to buy that, but the effect of the fact is this: Whenever you bring in a man and sell him a (1578–88) piece of land, he comes to a new country; he brings four or five or six or 10 or 20 families from the same neighborhood. He writes his friends, "This is a great opportunity so and so," and brings others.

870 I can remember one time a great many years ago at Spokane there where we brought 27 families from a town that only had 32, when we got the two leaders. I know that around Ontario there are probably 25 families that were closely connected with the same point in Iowa, because some one or two fellows came from there. Now those men are marketing agents for a railroad. They think of the things in their country that their country needs and the opportunities there. There comes an inquiry, "Can we get cows there?" "Can we get good fruit?" "Can we get this, or something else there?" The result of the thing is—and this is one of the reasons why we want this short line outlet—and the other way, we can't go by the other over to Salt Lake, over the Clark Road, down through that desert. Everybody here has the same products we have. We want to go where people come from. California is filling up with people; it is going to continue for many years; and the coast is going to continue for many years; and we want to go in, because we can't do business unless we have people to do business with.

Q. Will this cross-State line as proposed in this case be the outlet you want to the coast? (1589.)

A. The people in my country tell me this: There are two main reasons why they want this. The first is this: The stockmen, shippers, and things of that kind, they say, "We want this road out here because of this; we will ship in preference to any other route

over here the great amount of our stock, because we might want to divert to another market in case the Portland or Seattle market is not good or glutted, and the fact of shipping our stock over here will give us a better price, as a rule, because there will be
871 competition." The other one is this—that we all feel that in shipping over this route, it gives us an opportunity to get more business. Now if you had sold your stuff in Los Angeles it would not make any difference; you could ship over this road here; but suppose you wanted to stop your stuff at Visalia, suppose you wanted to stop it at Bakersfield or suppose you wanted to stop it at Sacramento, you might want to do business at all of those towns, and that is one of the main reasons we want to get over into California, or into San Francisco, because it is a shorter distance and because it is going through a country where there are people to do business with, and those are the essentials. (1590.)

I have never examined Mr. Teutsch's Exhibit No. 1. Can anybody tell me what the basis of this is; what I mean is, what proportion of this stock and potatoes and things of that kind—is there any basis for it?

From my knowledge of the movement of products from Malheur County and the Snake River Valley which is adjacent thereto, it is my opinion that there would be products in considerable quantities that would move into the western market from San Francisco northward over the proposed cross-State line, if it were built. (1591.)

I think there are probably small movements of poultry and some things perhaps to San Francisco. I don't know just to what extent that movement is at this time. As far as I know, everything that is routed is either by Portland or by Ogden and thence to San Francisco over that route. There is no question in my mind but that the construction of the cross-State line would stimulate a movement of produce into the San Francisco and bay area. It is a shorter route, and then, as I say, the possibilities of other business. If
872 the market conditions in San Francisco are as good as Los Angeles, there is no question but what a lot of this stuff will take that route.

As to whether, in shipping into that market under present conditions, we have to go through territory producing the same produce and go into markets in competition with such territory, I mean this—that in a general way, we will say, in the first place, if you were shipping stock to San Francisco (1592) and the distance was 1,200 miles one way, or was approximately 350 or 400 miles shorter the other way, and if you could go through on one feed, you would naturally select such a route as that in order to avoid shrinkage and things of that kind. That would be the natural thing to do, because it would save time and shrinkage.

Cross-examination:

I am looking some to western Oregon for markets of the produce of the Snake River Valley. I think in the future there will be more

of it. Now we will get right down to this: I notice in Yakima Valley they shipped last year 7,300 cars of alfalfa products, and from what I know, having lived in Tacoma six years, I know that over on the other side a great deal of alfalfa comes over from there, because my mother has bought alfalfa at Lakeview, about seven miles from Tacoma, in the past. So that, from what I know of western Oregon and what I have read in connection with dairy matters, and things of that kind, I would think that reasonably we ought to have a good market for it. If the dairymen of the Sound country, of Puyallup Valley and up in through there, and the Seattle section and all through there, can afford to buy alfalfa
873 for their hay, why, they can in western Oregon. (1593.) I think western Washington is limited to the Yakima country for their alfalfa products. The only alfalfa production which they have available, except such as they raise in western Washington, is the Yakima Valley. In western Oregon they can draw on Klamath or the Rogue River country for alfalfa; they can draw on Bend, Redmond, and the Deschutes country; they can draw on Hermiston and the Umatilla project; they can draw on Union County, or even Baker; or they can draw on Walla Walla or Yakima. But here is a fact, Mr. Spencer: In most of those sections you have mentioned, with the exception of the Yakima Valley, the production is not so extensive but what perhaps they will dairy and use that up in the shape of feeding cattle, for dairy feeding, and things like that, in districts like the Rogue River, because they are very limited. (1594.) But here is a situation you are going to face in our country in a very brief time. You are going to have 150,000 acres come under production as soon as these Government projects will be finished. The Vale will be finished in a couple of years or so, and Owyhee in five, and the Black Canyon, from all reports, because they have $900,000 available for a second dam and it will only take two million to build. We are urging it for power reasons. We have already spent nearly two million dollars on that Emmett Dam—I attended a celebration there a few years ago—and we now have about 40 or 50 per cent—when we start in with new lands—now I will give you an idea: I own all the law will allow me of lands down there; I am going to put that under irrigation. What is my crop going to be? If I get that water in the spring of the year it will all go into wheat, probably produce 30 bushels or more, and in August
874 of that year it will all be seeded to clover or alfalfa as a starter crop following the wheat. Now I will put it that 50 per cent of that land is going into alfalfa and clover, half probably alfalfa. I will say to you that new land produces more than the old. It will probably average six tons within a year or two. Now you have got 75,000 acres. If you take half of that at 6 tons it will be 450,000; call it three, 175,000 tons of hay there. It will take more eventually, as it gets older and (1595) older we will use up more alfalfa and we will have less to go on the outside, because

we will raise more of other crops, but on the jump there it is going to show a tonnage of three or four hundred thousand tons of hay. Probably we will be glad to export for several years, maybe the next seven or eight or 10 years, 150,000 tons a year. If not, we will find some way to handle it. But there is the situation for you.

Yakima is credited, according to this statement I have here, with $12.50 and $15 for that hay, and that they shipped about 13 tons to the car. But the alfalfa put in meal form, they shipped in alfalfa meal last year 300 cars, value $500, and while they were figuring the value of the other at approximately 185 or 200 they must have either got a lot more or got a bigger price.

There are three things essential for a dairyman to do, and they are not doing it in the Willamette Valley today: First, have good cows; second, he has got to feed the cows if he makes a profit; third is management. Now in Wisconsin, in California, and these other sections where they are dairying, they have to pay $15.00 to $20.00 a ton for good hay, and they could pay more here.

Q. But they raise it in western Oregon, don't they, about 850,000 tons? (1596.)

875 A. I understand, and I notice that your college has that up constantly, that they don't raise, don't produce. I saw a statement that in a single county there was over 30,000 tons needed in that county just recently. There was a statement made just recently that they should be producing 30,000 tons more of alfalfa or clover, and also claiming there was 30,000 tons in that one county more succulent feed. So it shows they don't.

Western Oregon, in a gradual way, may absorb some other things here. It is possible there will be an interchange of cattle, and it may be some sheep, and things of that kind. I think, generally speaking, western Oregon will go in, and will want more dairy feeds from us of various kinds. Now we might ship corn. Now there is a proposition I have taken up myself. I got a sample of ordinary corn, taken from Charlie Emerson's place two miles from Ontario, and sent it on. All right; they wrote back to me and said they wanted their chemist to test it, I suppose for flour and things. I have that letter here; I could read it if necessary; that the corn there equaled the corn they get from Nebraska and Iowa. We have a demand for corn in southern Idaho. (1597.) But I am telling about this. The fact of the matter is, we haven't got it down to the matter of raising comercial corn, which we could do. We could raise three million, four million or five million bushels, if we wanted to, because, I see where the production of Iowa as an average proposition was 39 bushels, and yet our county agriculturist gives you 59.7. I can show you a letter I received from a good Holland farmer there that in 1925 he had 11½ acres of corn that produced 115 bushels per acre. Everybody knows him, Pete

876 Tensen. Everybody knows he is perfectly reliable in that country. The same letter said his boy had either six or eight

acres in Early Bliss potatoes that averaged 325 sacks. Now that is practically a carload—330 is a carload, I believe, to the acre.

Now the same way with this corn. We had a corn contest in Ontario in 1914; we started in the month of June. Not an acre of land under that was fertilized, because in those days we thought none of our land would ever require fertilizer, but it was old alfalfa ground plowed up and put in potatoes. There were eight out of those 20 men—we started this contest, and in July we put up a prize and nobody knew it, and there were eight men had 120 to 130 bushels of corn to the acre. So it gives you an idea.

Now our condition (1598)—we will have to do some things we don't do now. We will have to put in corn cribs, we will have to be able to take our water off a little earlier than some of these fellows do, and we will have to use better methods. But I don't know a reason in the world why that valley should not have an outlet to this coast, even California, for our corn and all of our products. I talked to Colonel Patch, who I believe comes from Iowa, that runs the cannery at Payette. I was talking to him about the corn proposition. He said the Snake River Valley is the only region west of the Rocky Mountains that can produce good corn. I said, "Do you think it is as good as in Iowa?" He said, "Yes." We have been growing corn there, that I know of particularly, since 1910. It is true they are shipping corn into southern Idaho, because the fellows don't put that corn up in shape, because they find a little market there at home for it; and we have so many other products that sometimes may be more of a cash crop. But speaking about that very thing, I
877 am going to give you a little illustration. I figured with Mr.
(1599) E. M. Greig three or four years ago. He had 55 acres that produced 60 bushels of wheat, and he had 23 acres that produced 72 bushels of corn, and he sat down to figure which was the most profitable, and when we got through we found with the 72 bushels of corn against the 62 bushels of wheat there was more money in the corn, and it took one and one-half as much cash on the part of the farmer to raise it because it only takes 12 pounds of corn to seed an acre and we generally put in two and a quarter bushels of wheat to the acre to seed it, and there was the sacks, the threshing, and all that, while the men who raised the corn went out in the fall of the year when he had plenty of time and husked that and took care of it. So that he actually did most of the work himself and wasn't out a lot of cash. But we found as a matter of actual net returns that the 72 bushels of corn were more profitable than the 60 bushels of wheat. It is only a question of education, a matter of a few months or a year or two. But why we haven't done it is because this fellow puts in 10 or 20 or 30 acres of corn, or maybe he puts in 50, and some sheep man comes along sometimes and rents five acres for pasture after the corn has been taken off of the stalks and pays five, six, or seven dollars an acre, turns in a bunch of sheep in there, and as long as they can handle it that way they won't bother

with shipping it. But what are they going to do when they have 10 times that much, or when they can start in to make it a commercial (1600) proposition?

Los Angeles has more population, more consuming capacity than the whole State of Oregon; but also has Frisco and
878 Oakland and the bay district. They have got a lot of valleys back of them and they draw on Nevada, Oregon, and Utah. They draw from Montana and many points; and that is one reason why with a shorter line they would draw from here more extensively. We ought to be able to supply stock. Montana is shooting through their stock with a clip at San Francisco, and Texas and such States; they are sending their stuff in, and there is no reason why there should not be a market for part of our potatoes in California. Yakima ships I think 700 or 800 cars. Our region don't ship anything like that, and there is no better potato than ours—we could raise 10 times as many, and it is reasonable to suppose when we cut down the distance to about 800 miles to San Francisco and the bay district it will be done. And when we get these Californians a little better acquainted with our territory each one will be telling every one else all through California that they can get a car of potatoes in Ontario, or up in there, for (1601) such and such a price, and we will be shipping more and more all the time. You will find your markets doubled up and trebled. The production doesn't double up our markets. I am talking about the market. I mean this: I mean these very men that will come from California, and those things, spread the gospel where you can export produce at a certain price. I have known an apple raiser to take a car back to Nebraska and sell it, or to take it to some town they came from in Kansas and sell it, or in Texas. That is the way you build up traffic.

Generally speaking, the Twin Falls country is as productive as our country. I think along the line of crops. I don't think
879 they raise the same crops we do. They won't raise corn in comparison, because we have a longer season. They raise a large volume; and fine quality of potatoes. They raise enough beans to feed the entire coast, I guess. (1602.) They raise alfalfa; and if they were shipping it to western Oregon, I have a suggestion: We might have a market for some in northern California. But I haven't suggested alfalfa into San Francisco. It may be possible that we will find a market there for it.

Q. But I am wondering if Twin Falls doesn't ship any great volume into central California how you can expect to do it?

A. Well, we are simply like the process of all of those things. When you are within a certain distance and can get down there with it, all you have to do is to scrap with the other fellow a little.

The short line does not come over into the Ontario section to any extent with their literature and so on. I will say they haven't I have had quite a dispute with the short line in that way. They have some ideas and I have another. Now I will give you an idea.

Sometimes it is not always their fault; I don't want to say anything mean about the short line, or anything, but I will tell you, sometimes they don't see with the vision the same as anybody else. I have been 40 years connected with movements in developing. We went to Spokane in 1878 when I was 9 years old, five years before it was on a railroad, and I have been on the path ever since. When I came down to this valley, as an illustration of what I mean by vision in advertising, let me tell you this. (1603.) (At Yakima, Wenatchee, Hood River on the O.-W. R. & N., and at The Dalles and La Grande
880 were fruit stations, fruit displays. I came down here in 1907 and orchards were selling at two or three thousand dollars an acre at Wenatchee and Yakima, and the world was full of men hunting for orchards and looking for such things. Over across the river at Payette I saw the most beautiful orchard I ever saw, and hundreds of acres in there, so the next year or two after that I organized, or tried to organize a movement down there, and I asked the short line for permission to put a fruit station—I got the fellows interested at Boise, at Nampa, at Caldwell, at Parma, at Ontario, Weiser, and Payette. I said, "If a gentleman coming through this territory sees one fruit stand he will be interested, but if he sees seven he will know it is a real apple country." I had a picture drawn, with a beautiful glass building, to put on the track, and things of that kind, but I could not get permission. I don't know why they didn't want them; they thought maybe it would spoil the looks of the station grounds, or so and so, and I didn't get them. But here was the logic of the thing: They were hauling people through, as I explained to the officials, clear to Yakima Valley to buy fruit orchards, or some other point, where the Union Pacific didn't have any railroad. They were hauling them up to the Wenatchee country where the Great Northern controlled it, or in those days I think the Northern Pacific generally controlled the (1604) Yakima, where we could have sold them in that valley if they had known all of these things. But they could not see it from the tracks, those orchards lying down in the alkali bed, and there was the best chance in the world for doing something with those hundreds of fellows coming through every day hunting for good orchards. But that was their policy.

881 Now, I took up with Mr. Smith, of Omaha, here some time ago, the advertising of our district. I said to them, "Gentlemen, I don't know how much experience you have had, but," I said, "I want to tell you this: The time to advertise this country is now, before we get the water, for the reason you will get it settled up with a better class of men if you start now than if you wait, as you say, until the water is ready and then put out advertisements, because you get Tom, Dick, and Harry. If you wait until the water is ready, here comes a fellow with $500 cash and that is all he has got. All right; it takes $500 cash to buy one of these tracts and one of these permits. He thinks he will get by some way if he buys that, and he goes out and buys it with just a little cash and

hasn't anything left to do anything with." Now I said, "You start your advertisements now and what will happen? Here will come a few letters from the type of fellow who has got only $300 or $400 or $500. You write him and tell him it will take all of that (1605) cash, and what happens? He forgets you. He needs that money to live on, and he is gone. But here is the fellow with $4,000 or $5,000; he sees that ad and he inquires about it. You go on to tell him these lands are appraised at about a fifth of their value; that these lands when in alfalfa will yield them enough to pay 6 per cent on $200 an acre and it won't cost more than $20.00 or $25.00 to get it into alfalfa, and that these payments are about half what our men are paying now on irrigation. He will say, 'That looks pretty good. I have got a boy growing up; I will just go out and look at it.' So he comes out." And, as I said before, there never was a
882 proposition put up like this before. Now he buys 60 or 80. He is a man that has got money; he has saved money; he is a fellow who has always put away a little, and he is the type of man who will have that money all ready by the time that water is ready, and what will he do? He will tell some of his relatives and friends, and what is the result going to be? In two or three years from now you can't buy a piece of land for love or money. That is what is going to happen.

Q. Is the Oregon Short Line advertising these projects so people will be informed of these opportunities? (1606.)

A. Not that I know of. I have got in enough jangles anyway. I will say this: I have received during the last 10 years about 10 letters from the short line department at Salt Lake. At least five or six of these fellows were fellows who had already written me, or they went back to the department to find out if I was lying, or telling the truth about it, to get more evidence.

Like a great many other things in connection with salesmen, the market is open for all of us. Now we will do some business with San Francisco. We will ship in and we will be shipping butter in there, we will be shipping poultry in there, probably this and that commodity, and on the same terms as the Twin Falls. To-day Twin Falls has several hundred miles (1607) the best of us.

Q. They are not competing with you in so far as selling in that country, are they?

A. I don't know. I don't know much about Twin Falls, how much they are putting into the San Francisco market.

The Utah Valley is some valley as a producer, near Ogden. It is true to a certain extent they raise the same products we do.

Q. And they are only 790 odd miles to San Francisco from Ogden. Now if they don't do any business with the bay district compared with what you do with Los Angeles, isn't there some reason other than the matter of salesmanship?

883 A. Well, aren't they all doing business? Isn't Utah doing business? Don't you pick up the Los Angeles paper and it

shows they are putting sheep, maybe, or cattle from Montana, from Nebraska, from Texas, as well as Utah and Arizona, and up here to Oregon and other places? Isn't it a question that we are all of us competing together in that market? Isn't it a question they are increasing there every day; that San Francisco is requiring more and (1608) more stuff, jumping by leaps and bounds? Have they reached the point that the California market would not supply it? Should we sit off to one side and make no effort to get in there, let the other fellow get it all, because he lives in Twin Falls and Utah?

Q. If the construction of a line to take Twin Falls into San Francisco with its produce has been a disappointment and failure to date, shouldn't we wait and see whether they can do some business before we build another one across the desert of Oregon to try to let you experiment with it?

A. I thought we were going to try to show you that it wasn't a failure. You say the Rogerson-Wells road is not used extensively. Maybe there are reasons for that. I don't know very much about it. Do you have trains over it every day, or once a week, or do you make them any better rates? Of course Twin Falls logically should ship over that road.

Q. They can ship whole trains of poultry or perishables; we give you any ten cars of special service. I am speaking about Twin Falls.

A. We know naturally with our shipments, with a road across (1609) this way, we will get into San Francisco shorter. We don't think we should be condemned in the development of the Owyhee project, when we are going to add 10,000 carloads to your
884 freight. We think we ought to be helped to get into these markets as reasonably as anybody else and by a shorter route. That is the way we feel about it. So we can compete, and we feel that we want to go through territory where there is business that can be built up.

Q. Ontario is 30 miles shorter by the Wells junction.

A. You go practically to Minidoka and go back to Twin Falls, and maybe the train is made up the next day or two. I don't know. There are a good many different features in there. It is 1,025 miles from San Francisco to Ontario by the Wells cut-off.

I was a witness in the first cross-State line case tried here in this building four years ago, in '23. (1610.) I testified then we were not permitted to ship out alfalfa hay because of the weevil. We are still under quarantine. I would like to say in regard to the quarantine for alfalfa weevil, that we did have, in 1920, the weevil, and I remember one particular field of alfalfa that I think it was in 1919 cut 1,000 tons and it dropped to 400 in 1920, and in 1921 and 1922 we were badly afflicted with the weevil. About there, or somewhere along in '22 or '23 we brought in a parasite and about that time it was resolved that spraying our alfalfa was the only method of checking the weevil. Mr. Reeves came there from Salt Lake, a Government entymologist, and Mr. Wickland

from Parma, and we had an airplane spraying the field. We discovered to our surprise that the men gathered up five weevils and three of them had this parasite in them. (1611.)

I heard the previous testimony given here about the weevil—eradication over in that country. We haven't noticed the weevil for three years there I think to-day. I want to say I think '25 was the last weevil I ever got my eye on. I went out with a
885 bunch of men to see if we had any weevil. We hunted around two or three stacks, and about made up our minds there wasn't any such thing as a weevil in the country, when under one stack we discovered two down under the bottom of the stack after careful search. That was in '25. There has been less and less. I don't know how you can tell from the class of crop there is not any weevil in the country. I don't think there is any weevil possible at all there. Now once in a while something might have escaped. But here is the situation, so far as the weevil is concerned: There is no difference, and the weevil to-day is not any worse than any other little bug, because you have a sure cure, and he has cured it. So far as the quarantine is concerned, Mr. Martin, of (1612) San Francisco, asked me last year "Why don't you have that quarantine removed?" I said, "We are too busy about other things. We are not shipping hay. We will some day and we will see that it is removed." There is talk where two men meet on the road, where it has been 4 or 5 years, that the weevil comes in the county; if it comes in it moves from one place to the other and moves around. But we haven't got it now. You might have had the smallpox 5 years ago and got over it. That is the situation to-day as we regard it. (1613.) There have been no steps taken to remove the quarantine. I think the county agent has brought it up with Mr. Weatherspoon, who is a member of the State Board of Horticulture. He was down there some time ago and said he was going to propose to the board to take it off, to remove it. That is what the county agent told me.

886 LEONARD E. GILKEY was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct examination:

I reside at Albany. Albany is the county seat of Linn County in the Willamette Valley. (1614.) I am secretary of the Albany Chamber of Commerce. I have held that position four years. Prior to that time I was engaged in farming in Linn County for 14 years. I believe I am familiar with the resources of Linn County, and particularly with its agricultural resources. Preparing to testify in this case, I have made a rather cursory investigation of the tonnage that is shipped out of Linn County eastward bound. I secured that information from the different buying and shipping agencies of the county; and also I worked somewhat in conjunction with Mr.

Teutsch when he was securing this agricultural information for the public service commission.

As to whether I am familiar with the Linn County figures included in Mr. Teutsch's report, Exhibit 1 (1615), I have never seen that exhibit. I perhaps should not have said I assisted Mr. Teutsch. I gave him what information I had and check up for him on a few of our industries there. In a way I did assist. In addition to that I made some independent investigation of my own. I would say that Mr. Teutsch's estimate of a total of 324 cars of present agricultural tonnage available for movement over the proposed cross-State railroad is a conservative estimate. I would say his suggestion of a potential tonnage of 59 tons in addition to the 324 to be available within the next 5 years was very conservative also.

887 I have prepared, in exhibit form, the information I collected showing actual movement of tonnage at the present time. It is the sheet I have before me. (1616.)

(The statement so offered and received was thereupon marked "complainant's Exhibit No. 25, Witness Gilkey.") (1617.)

This exhibit shows practically what Professor Teutsch's exhibit shows here, with the addition, I see, of tonnage and carloads of eggs that were shipped out of Linn County last year.

Q. Does this include all of the tonnage shipped from Linn County, or merely the proportion which you estimate would move or might move over the cross-State line?

A. Well, I wouldn't say over the cross-State line, but shipments to all points of the United States lying east. I didn't follow these different carload shipments to their destinations. In addition to the agricultural tonnage which I have checked over with Mr. Teutsch, I went into the present eastbound lumber tonnage out of Linn County, which is our great export tonnage. As to the lumber movement, I found that last year, checking through the railroad agencies, freight agencies, that there went out of Linn County, from Albany and Mill City, 8,640 cars of lumber, eastward bound. (1618.) Practically all of that lumber was Douglas fir. In addition to that I understand there was a substantial movement to California and other destinations.

Mill City is on the extreme Northern boundary of the county, northeast of Albany. It is served by the Southern Pacific, by a branch that was the Corvallis & Eastern. Those shipments move entirely through Albany.

888 Toledo is west of Albany, on the coast. To reach the main line of the Southern Pacific and go over the Great Northern or Northern Pacific through the Oregon Electric the lumber shipments would come through Albany from Toledo.

Q. Do the rail lumber shipments from Toledo pass through Albany at the present time? (1619.)

A. I presume I may be wrong on that. There is a west side Southern Pacific road that I am not familiar with as to the traffic

on that. I presume that would go over the west side. It is possible that they wouldn't come through Albany. I included it because I understood that there had been no check on the traffic eastbound out of Lincoln County. I took it upon myself to secure that information. In addition to the rail shipment from Toledo I believe there is also a large production which moves out by water.

My figure of 30 billion feet of marketable timber includes Federal reserve timber as well as privately owned.

Q. To what extent is the timber of Linn County being milled at the present time? Is it being milled in any substantial quantities?

A. In comparison to the amount of timber that we have it isn't. We have about 20 more mills of small capacity (1620) operating within the county, and the large Hammond Lumber Company mill at Mill City. The small mills I refer to are generally referred to as tie mills. They are just simply operating on the outskirts of our great timber supply. The mill at Mill City is the largest mill in the county. I do not know the capacity of it. It isn't as large as the Toledo Mill.

Q. Have you any information as to whether the timber stand which you have shown is mature and ready to be marketed?

889 A. The estimate by the cruisers who have worked in that district—I am quating particularly the cruiser employed by the county; Linn County is making, and has been making for the past two years, a cruise of all the timber in the county, and I am using his estimated on that, and I understand that is the way they check on it.

As to the interest of Albany and Linn County as a whole in the proposed cross-State line, I might say that that interest is just general. I might further explain that by the fact that we (1621) believe that the element of development of the State of Oregon will depend upon additional east and west transportation facilities, and while I question that the cross-State road, with its western terminus at Crescent, would be of any very material benefit to us, yet we are interested from a safe standpoint. As I stated, our interest is of a more general nature with the western terminus of that road at Crescent. We are, however, vitally interested should the cross-State railroad be built in an extension, or feeder, whatever you might call it, of that line from somewhere, some connection in eastern Oregon, preferably at Bend, westward over the Hogg Pass show a connection with the Southern Pacific line at Detroit or a connection with the Oregon Electric's proposed extension at Cascadia, in Linn County. We believe that that would be a very material benefit to Albany and Linn County. We feel that later development would be advanced or hastened by the construction of the cross-State line. Aside from that our interest is in the general development of the State. (1622.)

As comparable with our entire output our agricultural products tonnage eastward bound, I would say, is comparatively small.

890 A great deal of our products find a market either north or south. Our apples and pears, if you will notice on the

estimates given, are very small. Apples or pears, I think, however, will practically all of them go eastward. Our prune market will go east. That would also be true as to cherries and strawberries. The market for our canned fruits and vegetables is pretty generally throughout eastern sections. I believe, although we do get some trade in the Orient for them. I would say that the production of canned fruits and vegetables has not increased materially during the past few years in our section. (1623.) The tendency during the past few years in the small fruit and vegetables that we have, there has been very little attention turned to the canning of vegetables in our section, but the tendency the past few years in the small fruits, the cherries and berry fruits, is to ship that fruit eastward green, or what they call the barreled processing. They ship most of our strawberries, which is the largest acreage of tonnage in small fruits, in barrels, put down in a process of sugar, raw.

In the shipment of our barreled and fresh fruits and vegetables I would say expeditious movement is of importance. However, in our location we are almost as close to Portland, which is the beginning of the eastern destination, as we would be to Eugene. It doesn't make so much difference, but expeditious movement of all those products, of course, is advantageous.

891 Cross-examination:

I would say there wasn't very much difference in the mileage whether you go through the Portland gateway or through Crescent over the proposed line.

In the first tabulation of my Exhibit 25 I have 349 cars of various products which are now available for (1624) the cross-State railroad. There were that many cars of those products moved out last year. They were shipped out by rail. We have no check on the auto truck movements that go out. I checked with the different shippers. It all did not move out Southern Pacific, the Oregon Electric carries quite a bit of the canned stuff. The bulk of it, however, goes Southern Pacific. The Great Northern and Northern Pacific, who are owners of the Oregon Electric, are close competitors of the Southern Pacific in our county. I wouldn't say that they get a good percentage of the carload traffic. On the lumber shipments they tell me they do practically (1625) no business on eastern shipments of lumber. There is no mill on their line. The tabulated amount of eastbound lumber shipments that I got was all secured from the Southern Pacific. There isn't any lumber in that first tabulation that you talk about. I imagine they get their share of that. What they get comes down through the Portland gateway and goes north over their lines, to the destination, wherever it may be, in the East.

As to whether some of that 349 cars move to Portland over the Oregon Electric or Southern Pacific and then are transferred to boats, I couldn't say.

Q. It may be purely a local haul from Albany to Portland?

A. No, in checking up with these different shippers I tried to emphasize the fact that we simply wanted data on the eastbound shipments by rail.

892 I doubt that any of these cars that were hauled out of there by the Great Northern or Northern Pacific through their (1626) Oregon Electric are ever going to be available for the cross-State line, but I would say there is a chance that some of them would move by the cross-State road. As I say, we are geographically situated about midway between Portland and Eugene, and I imagine there would be about as good a chance of their going one way as the other. I do not think those industries located on the tracks of the (1627) Oregon Electric are going to route their products over any line except the Great Northern and Northern Pacific if they can help it. I am comparatively ignorant on traffic matters, but it would seem to me as though they (the railroads) would try to hang onto all the eastbound tonnage that they could. It is a matter of dollars and cents with them, is it not? Most of the tonnage is products of agriculture. I presume they are available to any railroad that would give the best service and the best rate. I do not think they are commodities that by reason of the location of an industry on the tracks of a railroad (1628) can be reasonably expected to move by that railroad.

Q. (By Mr. DEY.) Your lumber, present lumber tonnage available from Albany and Mill City, 8,640 cars, what was that? Lumber?

A. Lumber, all of it. It did not include slab fuel and hogged fuel, and other things for local haul unless the Southern Pacific freight agents gave me the wrong steer on the matter. That was eastbound lumber shipments. I got that at Albany and just an estimate of the Mill City tonnage.

893 Q. Well, now, what mills are involved in those 8,000 cars?

A. Well, as I stated previously, the Hammond Lumber Company mill at Mill City, the score or more of small-capacity mills situated in the foothills of Linn County, and they drew somewhat from the territory west of Corvallis, but not over the slope into Toledo. None of those moved over the Oregon Electric. These agricultural products load at (1629) Albany and Lebanon. Those, I think, are the only two points. Now, on some of the grain or seed shipments, it might have come from Harrisburg or Halsey, small towns in the southern part of the county on the Southern Pacific. There are about four or five principal shipping points in the county. I don't know how much of that went beyond Portland.

Q. You don't know that the port of Portland ships out of here by water more of these first two items of seed than the railroads handle out of western Oregon to the East?

A. I think I will have to qualify my answer there again, Mr. Dey. I emphasized the matter in consulting with these shippers, getting their estimate of the tonnage that they had shipped out,

that these were all eastbound rail shipments. Some of them might have been headed into Portland and then loaded from their onto boats, but then it was my understanding that they were not. The ones that went other than East by rail I wasn't interested in. I got information I asked for from the Oregon Electric agent. (1630.) All of those 25 cars of eggs moved by the Oregon Electric.

Redirect examination:

The Albany Chamber of Commerce is an intervener in this case. I am appearing under that intervention.

894 Further cross-examination:

On my statement I say "potential agricultural tonnage, 84 cars." By potential tonnage, what I meant to convey was an increase that might be expected over the next five-year period. The natural development of our agriculture would make an increase. I think we have had such development in the last five years. (1631.) As to whether it is reflected in the earnings of the Oregon Electric, I am not familiar with their earnings. I am secretary of the chamber of commerce at Albany. It hasn't been my business to look into the private affairs of the Oregon Electric or any other railroad.

I have doubled the lumber tonnage in five years. That is an estimate entirely, of course, but I believe we have sufficient grounds for estimating that increase. That is because of new construction that the Oregon Electric is making down into that country.

Q. Well, are you going to have those people build down there into this country and develop that tonnage and then turn it over to a competing railroad?

A. We are not turning any tonnage over to any railroad, as far as that is concerned. (1632.)

Q. You are talking about this as being available for the proposed cross-State railroad.

A. Available for eastern shipments, if you will notice the heading of my exhibit. That lumber tonnage would have a relation to the proposed cross-State railroad if the Hill interests entered into the particular section that we are most interested in building. That is a section from Albany to a connection with their lines at Bend.

Q. You think if they went up to Bend they would turn it
895 over to the cross-State line if the cross-State line was built by the Union Pacific?

A. That is rather questionable. I don't know whether they have any through joint rates with the Union Pacific or not. (1633.)

Q. Where are these strawberries frozen? You way there, "Frozen, 87 cars."

A. We have three processing plants in the county, one at Albany, one at Lacomb, in the strawberry district, one at Lebanon. The berries are shipped by rail, I presume by express. (1634.)

HAL D. PATTON was thereupon produced as a witness on behalf of complainants, and, having first been duly sworn, testified as follows:

Direct examination:

I reside at Salem, in Marion County, representing the Salem Chamber of Commerce, and as a tax payer. I have been in business in Salem 42 years. During that time I have been actively connected with various civic enterprises. I have been directed to appear here on behalf of the Salem Chamber of Commerce to testify in this case.

I have prepared information showing the annual shipments of freight that might be benefited by the construction of the cross-State line, and with your permission I would like to read it (1635) into the record at this time. It isn't prepared in exhibit form.

An estimate of annual shipments of freight that would be benefited by a cross-State railroad:

Lumber, from Marion County and Dallas—that is right
896 across the river in Polk County—13,000 cars annually.

Farm products, now this was handed to me by one of our leading merchants in Salem, D. A. White & Company, who shipped a great deal of seed, 300 to 500 tons of rye grass, annually, shipment to Central States; 500 to 600 tons of clover seed; 100 to 200 tons of vetch seed.

Wheat: Soft wheat is shipped to the East.

Gile & Company and Paulus & Company, the big shippers of canned goods, report as follows:

From 300 to 400 cars of canned fruits, berries, and vegetables are shipped from Salem annually to eastern Central States, and would be benefited by a shorter route.

Fresh cherries: Those are by express. In 1927, express (1636) shipments of fresh cherries to the East amounted to 103 cars from Salem. It wasn't so good in 1928, owing to the crop failure.

From the Lake Labish meadows alone, that is just about five miles below Salem, they shipped out last year 550 cars of onions, valued at $450.00 a car; that is the annual estimates, $450.00 a car.

Celery, which is perishable and which would be by the shorter route reaching the Central States much sooner, and be sooner by this central route, we have 500 cars, coming from that land down there, valued at $500.00 a car.

40 cars of lettuce, valued at $700.00 a car.

Within a few years, these shipments will be doubled. That was a statement I secured from Ronald Jones, who is the secretary of the Celery Growers' Union and is absolutely correct. They are not padded.

Now, the eggs: Marion County produces about a million
897 dollars worth of eggs. This is based on the 1924 report of the United States Department of Agriculture, giving Marion County a $624,000.00 on its annual egg production.

The fruit acreage: Within a radius of 25 miles there are in the Salem district 34,000 acres of bearing fruits, berries, and nuts.

Annual pack: In Salem alone the annual pack of fruits, berries, and nuts was 1,086,000 cases in 1926, and in 1927 the (1637) estimate was 822,000 cases, and this pack will be increased over the 1927 pack for this year. More than 1,000,000 cases of fruits, berries, and vegetables are packed annually in the Salem district.

The population of Salem—in 1920, Salem, Oregon, had a population of 17,679. In 1928 a conservative estimate is 26,500.

Portland and Salem tonnage: In 1928 the Salem Chamber of Commerce made for the War Department a survey of tonnage during 1927 between the two cities. The total was about 200,000 tons. Part of this freight would be benefited by a shorter route to the east.

You have the present tonnage there. Additional tonnage available within the next five years—a pessimist would give it about 20 per cent, an ordinary optimist would make it about 100 per cent, but some of the big optimists up our way that believe our country is going ahead would make it 300 per cent increase.

Now, the lumber mills adjacent to our city, that ship out these 13,000 cars annually, which I think is a small estimate of it—
898 I would make it more—probably the railroad officials have a better check on it than I have—the Cobb-Mitchell Lumber Company; the Willamette Valley Lumber Company, the Spaulding Logging Company of Salem, and the Spaulding Logging Company of Newberg, the Silverton Lumber (1638) Company, and the Hammond Lumber Company, and 10 or 15 other smaller mills.

We people up at Salem are directly interested in a more direct outlet to the east. We feel that the development of our country would go ahead much better if there was a cross-country railroad. In regard to competing lines and the Oregon Electric Railroad which I heard the question asked a minute ago, I will state this, competition along is what causes the condition at the present time. A successful railroad, such as the Oregon Electric should be, can be made a success by giving better service and meeting competition. Being a merchant of our city, I don't like to ship by truck, but the fact of a charge of 50 cents for hauling, for instance, from the depot to our store, which is taken care of by the truck shipments—and I find most of the merchants, while not approving of shipping by truck, on account of buying their merchandise, putting their merchandise upon their shelves at a proper price, must lay their goods down in their store equal to their competitors, and I would say this, if there are any Oregon Electric people present, that, coming from a merchant, I believe they could more than double their income by giving better service than giving different rates. That is absolutely foreign to the subject in mind, but I just want to say this for the benefit of any Oregon Electric people (1639) that should be here.

899 Cross-examination:

I have been a merchant in Marion County for 42 years. I was in the legislature. (1640.) I believe our county has grown and prospered perhaps more than any county in western Oregon in the last 10 years. I believe we have a greater variety and a larger pack of products and fruit and that sort of thing, than any of the western Oregon counties. At the present time I suppose our canned fruits and vegetables are shipped through the Portland district. As to by what route they reach them, I would suppose they would come there by express, or freight shipments, or over the Southern Pacific. I am not informed of that. I am not informed as to whether practically all canned goods go in by truck. I know what their shipments amount to, what I have here.

Q. And they go by water, largely, from the port in Portland, (1641) do they not, canned goods, the same as from Eugene and Roseburg?

A. Well, I don't know. I couldn't tell you just how they are shipped. That is up to the shipping agents. Traveling freight agents, I suppose, route them. They call on us at our store. We ship a great deal over one route, and sometimes we will change on account of the personality of the general freight agent. I believe we have had shipments over the O. W. R. & N. I believe we have had shipments from the east over the Union Pacific and Oregon Short Line into Salem, and over this other way. That is in connection with the Southern Pacific. They all get a piece of it.

Q. Now the bulk of your shipments, however, go Southern Pacific and are turned over to the Union Pacific, at Ogden, and that is the long route you object to, is that right?

900 A. We get a great many of our shipments in our business by Merchants Express. I don't know what line that comes over. We have only a little small business. (1642.) All I do is pay the freight bills when they come in. I sell stationery and books.

As to whether agricultural products as a rule go through the Roseville gateway and Ogden and east, I haven't taken that matter up.

The cross-State line would benefit the fruit grower, and to get into the market, as you know, if they could get their cherries, celery, lettuce, into the Central States a day earlier, there is no question it would benefit them; if they could get any of their products back east a day earlier and could get their money back that much sooner, I believe it would benefit them. (1643.)

Q. I think the mileage is in evidence here, and the mileage to Ontario, which is a common point, is four miles shorter via Portland than it is via Crescent Lake. Assuming it is the same, a cross-State line wouldn't benefit you at all, would it?

A. Not me personally, but it would benefit the people in the central part of the State. Do you mean to tell me that it is a

longer distance to ship from Marion County down here, down to Portland, and up there, with all those curves, than it is straight across, clear over there on the map? It seems to me it would be much shorter, and I have been informed that it would save 24 hours. Of course, the passenger trains could make it a little quicker, probably.

As to whether all those commodities, those perishables, move in refrigerator cars, your general passenger agents could inform you better than I could. (1644.)

901 PORTLAND, OREGON, *August 11, 1928.*

J. E. SHELTON was thereupon produced as a witness on behalf of complainants, and, having been first duly sworn, testified as follows:

Direct examination:

I live at Eugene, in Lane County. I am engaged in the printing and publishing business at the present time. I have lived in Lane County about 16 years. I am president this year of the Eugene Chamber of Commerce. In appearing here and testifying I represent the Eugene Chamber of Commerce, the county (1646) court, and the Springfield Chamber of Commerce. Springfield is three miles east of Eugene. Eugene has a population of about 26,000. I judge Springfield has a population of about 3,500.

The principal resources of Lane County *of Lane County* are timber, fruit, dairying, and some manufacturing. There is something like 65 billion feet of timber in Lane County. There are several large sawmills in Lane County at the present time, one at Springfield, and Wendling and Westfir, and smaller mills scattered around. In Eugene there is the Eugene Fruit Growers' Association. (1647.) Its business is something better than a million dollars a year. There is a flouring mill that produces all kinds of flour and feed and food products. I am pretty sure it produces cereals. The Oregon Cooperative Egg Producers' Association have a station at Eugene that gathers eggs from over that section of the country that could be reached. The eggs are shipped in there, and the association disposed of them at the location where they can get the highest net market price. The egg cooperative consolidate shipments that come into Eugene for reshipment. (1648.) That association ships eggs in carloads. The contract originally called for the shipment of two carloads a week. I don't know whether they are shipping more than that at this time or not. Swift & Company have a poultry

902 and egg station at Eugene, where poultry is butchered and shipped in large quantities. That poultry station ships in carloads. The manager told me that they were shipping to Chicago. In Eugene we have packing plants, and at the present time there is no wholesale meat distributing plant. One is contemplated, and the deal is being made now for the location there of a wholesale meat distributing station. Eugene has two modern slaughterhouses.

(1649.) There is quite a good deal of distributing out of Eugene in various directions in less than carloads at the present time. That has been true in the past. Eugene is pretty well situated geographically as a distributing center to serve surrounding territory, because it is the center of a territory that is easily reached by railroads and highways, with the exception of to the East. The road to the West is what is known as the Coos Bay road. It is my impression that Eugene distributes in communities over that line reaching from Eugene to Coos Bay. Eugene has rail communication to the north and south of it. (1650.) Eugene distributes in the territory particularly south, and not much farther, as a rule, than Albany on the north, Albany and Corvallis. I am personally interested in the request of the public service commission for an order requiring the construction of a line of railroad across central Oregon from Crane to Crescent Lake on the Southern Pacific. I have been personally interested in getting a cross-State line built across the central part of the State of Oregon from east to west and have been working to obtain that result for 12 or 14 years.

There is a concrete pipe works at Eugene that are making concrete pipe. They have rather a wide distribution, too. That company has recently, during the past year, used diadomite in its manufacturing products. I was informed (1651) by the manager
903 that they had ordered it by the carload lot from Harper. Harper is over in the extreme eastern portion of the State. That diadomite was shipped from Harper over the Union Pacific to Portland or from Harper to Portland by way of the Union Pacific, and south to Eugene over the Southern Pacific. The University of Oregon is located at Eugene. It has a little better than 3,000 students enrolled this year.

As to the sentiment of the people of Eugene and of Springfield and of Lane County generally upon the subject of the proposed cross-State line advocated in this proceeding by the public service commission of Oregon—other than the employees and retainers of the Southern Pacific I don't know of anyone that is openly opposing the public service commission's request. There may be a few that don't understand or are apathetic, but the majority of them, I would say 90 per cent of (1652) them, are in favor of this extension.

Q. On what considerations is that approval of the Oregon commission's request for the construction of this line based?

A. Because it would develop a new territory and enlarge the possibilities of Eugene of becoming a distributing center, and it would develop not only the eastern section of the State but the entire Willamette Valley, give us an outlet for the products that we have direct into a new territory with a shorter haul than we have at the present time, and it would let in necessities at a price that would help develop the territory that surrounds Eugene. I would say that practically all the sentiment to build a cross-State line was based on

the idea of fostering the general development of the State of Oregon.

904 As to what particular products I had in mind of Lane County as to which the building of the new line across the (1653) State would or might afford new markets, particularly in the larger quantities, would be lumber, and fruit, and vegetables, and dairy products, and also the wholesale groceries and the products of the Fruit Growers' Association, their meat-packing plants.

The people of Eugene and Lane County feel that the construction of this proposed cross-State line would be desirable to a very large per cent. They have curtailed the business of the wholesale houses that we have had in Eugene because of the fact that there is no way to get into that country except by automobile, and during the wintertime the McKenzie Pass is closed so that there is no opportunity to guarantee delivery of goods. McKenzie Pass, where is the only road, highway, we have across, the only connection we have now with it, except on the (1654) Southern-Central Pacific line running to Klamath Falls. The territory that we would like to reach is not available. An illustration of that is the wholesale drug house that I am familiar with having lost an order for $10,000 worth of goods simply because they couldn't guarantee the delivery on that at a certain date, for the simple reason that the snow on the Pass wouldn't permit it at that time, so they couldn't get the business. Later they moved to Portland, in order that they could get rail communication that wouldn't cost them so much. (1655.) This $10,000 worth of drugs was to be delivered at Bend. The Drug Company was the Oregon Drug Company. The filling of that order would have been possible had there been this line of railroad constructed east from Crescent Lake that the Oregon commission is not advocating. That is one illustration of the

905 feeling of the business men, and wholesalers, and distributors of Eugene that leads them to the conclusion favoring the construction of the cross-State line. Then a larger development on the west side of the mountains of products that could be delivered, particularly of hay that is there for dairying, would be reached and shipped into Eugene at any price reasonable to be paid for dairy-cattle feed. I should not say that it is practicable to bring hay from east of the Cascade Mountains to Lane County by truck transportation across the McKenzie Pass. There is sentiment in Eugene, and Springfield, and in Lane County for the establishment of closer trade relations (1656) with central and eastern Oregon by means of rail communication. That sentiment has been in existence for the last 15 years that I am personally acquainted with.

The students at the university come from all over the State. Quite a few of them are from central and eastern Oregon. The construction of this cross-State line, in my judgment, would be of benefit in facilitating communication and travel of persons between Eugene and Lane County and the central and eastern portions of the State

of Oregon. In Eugene we have the Zellerbach Paper Company, a wholesaler engaged in the business of distributing paper and paper products.

Harper is in Malheur County. The diatomite I mentioned came to Eugene from Harper. (1657.) It was loaded at Harper and came through by rail from Harper east to Ontario. From Ontario it went north over the Union Pacific and west into Portland. From Portland it went south over the Southern Pacific to Eugene.

We feel that the completion of the east and west railroad across the State into the Willamette Valley, means the greater development of the State as a whole than any other one project
906 could bring us. We feel that with a line 450 miles shorter into eastern markets than the line we have at the present time it will place us on an equality with Southern California in the shipment of our fruits and vegetables. (1658.) We feel that the opening up of the new territory and reaching into new territory and a short haul with lumber would put the mills to work that have been more or less idle. There are idle mills a large portion of the time in Lane County. I don't know how many of them—the small mills are idle now, and the larger mills are not running on full time. But I don't suppose that the mills as a whole have operated more than half capacity during the last year or two.

The construction of this line across the State is deemed by the interests for whom I am appearing and testifying a public necessity as it stands at this time.

Cross-examination:

The Eugene Concrete Pipe Works is the concern that uses diatomite. They have been operating in Eugene (1659) better than 10 years. I don't believe it has been under that particular name. It was originally the Eugene Concrete Works and it is now the Eugene Concrete Pipe Works. I was informed that they had put in a carload of diatomite to make their first test. I know that they got that one carload. I understood that they were using it right along in quantities.

Q. Well, you don't know how they happened to go over there to Malheur County to get it when the same product is available at Terrebonne, on the Deschutes branch, about half the distance, do you?

A. Well, you are reaching into a point there that might be debatable. It was considered that the Harper product was
907 purer than that at Terrebonne. I don't know anything about it, but then that is one of the contentions.

The people of Eugene and Lane County and the (1660) community there generally feel they would like to have a competitive railroad operation. The only service by rail in that territory now is by the Southern Pacific and the Oregon Electric, the Oregon Electric north only. We have never had the so-called Union Pacific system service in there. (1661.)

Q. Well, Southern California does not compete with Western Oregon, does it?

A. Fruits, yes sir. That is, we are not competitors now in a sense, but we would be able to compete with them did we have an east and west line where we could reach it with a reasonable expense of shipping. At the present time the rates of shipping and not so much the freight rate as the icing that has to go with the fruits and vegetables, makes it almost impossible to ship it there.

Q. What part of Southern California competes in products with western Oregon?

A. Wherever their fruits and vegetables are raised, particularly prunes and cherries, vegetables, and the like.

ELMO B. CHASE was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct examination:

I live at Eugene, Oregon. (1662.) I have lived there 31 years.
I am engaged in the production of a general line of outdoor
908 vegetables, ordinarily known as truck crops, such as rhubarb, asparagus, celery, and things of that kind; and also in the greenhouse the cucumbers and tomatoes under glass. That business is known as a partnership. My father and two brothers are interested. That business has been carried on at Eugene for 39 years in October. Myself and partners are interested in this proceeding that involves the proposed construction of a line of railroad connecting Crane in the eastern part of central Oregon with Crescent Lake on the Southern Pacific's Natron cut-off on the west. I have put down in a written statement some information respecting the business myself and partners conduct and their particular interest in this proceeding. (1663.) I prepared it myself. As far as I know it correctly states the facts. I do not have an extra copy.

The benefits of railroad development in opening up new sections of the country, thereby enlarging the trade area of a community, is strikingly demonstrated in the experience of our firm. As stated, we are engaged in a specialized agriculture project with truck crops outside, on about 80 acres of land and about 180,000 square feet of greenhouse space or approximately four and one-half acres.

The principal crops grown under glass are cucumbers and tomatoes; also a flower department. Outside crops, asparagus, rhubarb, celery, cauliflower and other outdoor vegetables.

Capital invested is about $150,000, with annual sales for 1928 estimated at about $85,000 to $90,000. (1664.) That amount represents the value of these products all f. o. b. Eugene.

Labor required, about 25 men during the winter and 40 to 50 men during the balance of the year; that is, perhaps for seven to
eight months. The business was started 39 years ago in
909 October. My father, F. B. Chase, moved here from Kansas without previous experience in this line. The business during that period of 39 years has been conducted on the same farm

that I now operate. From 1889 to 1909, a period of 20 years, the business was only able to show a gross sale of $7,000 at the end of this period. From 1909 to 1919 the volume increased to $36,000, showing the growth of the country and new markets available. From 1919 to 1928 the growth increased approximately to $80,000. The territory covered in sales was the seven Western States, California, Oregon, Washington, Idaho, Montana, and Utah and Wyoming to a slight extent.

All shipments are made by express, in order to cut down the time to eastern markets. The cost in this case, for instance, runs 45 cents a dozen cucumbers into Salt Lake (1665), express charges. In a few cases we have made carload shipments of our products. Those move under refrigeration. The distance moved and the time taken in transit is of very great importance with any fresh product. There is a deterioration in the product itself every hour that intervenes between the time that it is produced and the time that it goes onto the table.

The advantage gained in increased business shown in the development of any new country is much greater if the territory tapped is of considerable climatic differences from your own. When the Coos Bay line of the Southern Pacific was put in operation in 1916, our business was largely local, with a small amount of out of town trade in the southern part of the State. The effect of opening up this new territory upon the volume of business done is graphically shown by the following figures: From 1910 to 1916 the gross sales increased from (1666) $10,000 yearly to $20,000, or about $1,600 a year. From 1916 to 1918 the increase was $7,000, or 34 per cent. From 1917 to 1918 the increase was $9,000, or 33 per cent. From 1918 to 1919 a loss of $600. From 1919 to 1920 a gain of $14,000, or 38 per cent. This makes an average increase for the four years immediately following the construction of the railroads of $8,000 per year against $1,600 for the previous six years. The four years where we experienced that average increase was the period that immediately followed the construction and placing in operation of the Southern Pacific's branch line from Eugene to Marshfield and North Bend.

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Somewhat of a similar stimulus has resulted from the opening up of the Klamath Falls country with the completion of the Natron cut-off. Business with California has shown a marked increase due to faster express service over the new line, with the result that several months of the year this State, California, uses more of our produce than any other State, with the exception of Oregon alone. That is in cucumbers. Further, we believe that the proposed new cross-State line between Crescent and Burns will add materially to the movement of perishable fruits and vegetables to the intermountain and mid-west sections and result in greatly increased production in the Willamette Valley in this class of produce. (1667.) New markets will be opened for perishables that must reach the

market in a limited time, and personally we believe that such sections as southern Idaho and Utah will provide a ready market for such crops. All of the greenhouse crops are produced out of the normal growing season. They are cucumbers and tomatoes largely.

911 New markets will be opened for perishables that must reach the market in a limited time. Cutting the length of time in transit is the important item with such crops, outside of the question of price. If 12 to 24 hours can be cut from the time needed to reach these markets, it not only means that the goods will arrive in better condition but nearly as important is the fact that on the larger markets, such as Chicago, the rapid fluctuations in price, due to sudden freezes, etc., makes every hour count when trying to get into a good market before other supplies arrive. The broker in such a market keeps his shippers informed by telegraph of the condition of the market and the demand for his class of produce. When a sudden scarcity develops due to any cause, the price is likely to rocket upward and the demand (1668) will be strong. The shipper is immediately notified and very often takes advantage of this sudden market by putting increased supplies in the favorable market. The quickness of service into such a market is reflected very often in the returns received for the crop. This is especially true in the fall and winter crops, when the local outside supply is often eliminated in a day's time by cold weather.

Q. Do you and your partners in marketing your products in the seven Western States you have mentioned, and sometimes as far east as Chicago, encounter any competition in those markets with producers of like products?

A. There are large producing areas in the eastern section of the country, after you get back near the Mississippi River, around Chicago; especially, Davenport, Iowa, Terre Haute, Indiana, are the big producing sections. (1669.)

912 The producing sections I have mentioned ship west. They ship into the inter-mountain country especially. They occasionally go to the coast, but they go all through the Mississippi Valley and into the inter-mountain country. There is no production of vegetables of any size, such as my partners and I produce, in the Southwest, Texas, or Southern California. Our principal competition is with the Illinois and Iowa and Indiana producers.

A careful study of local conditions convinces us that this section, given good transportation facilities, can successfully compete with any other section in the production of out-of-season vegetables under glass. An abundant water supply, mild climate, cheap virgin land, an unlimited supply of economical fuel in the form of hogged fuel or sawdust, low construction costs of greenhouses, makes it possible to produce greenhouse crops here and sell in distant markets at a profit. Recent figures from some of the best greenhouse ranges near Chicago indicate that the cost of fuel for the year averaged (1670) about 7 cents per square foot of ground covered. Our costs here in Oregon were about 3 cents per square foot. Cost

of construction of new greenhouses is reported to be about $1.25 per square foot. That was near Chicago. Our corresponding cost is about 85 cents a square foot. The water supply, which is a very important item in greenhouse work, is abundant and cheap here. The Willamette Valley especially. In our local section wells 20 feet deep will often supply several hundred gallons per minute. We have one well on our place that will throw up to 600 gallons a minute from a 24-foot well. With cheap power rates in effect we find that our water bill will not average over $25.00 per month. This includes the supply used by 12 residents, lawns, outside gardens, and 4½ acres of greenhouses.

913 An early season, which brings crops on faster than in many (1671) sections, is also a great aid in getting into the early market. We find the season is about two weeks earlier in Eugene than in Seattle, for instance.

All these factors taken together mean much in the future development of vegetable growing, both in the greenhouses and outside in this section.

Each new territory opened up or better transportation provided into this already available means increased output and growth.

A careful check of the regions excelling in vegetable production in the United States will reveal that in the majority of cases they are located along or near large bodies of water and subject to other modifying influences. That is, they are found along the Pacific and Atlantic Oceans, around the Great Lakes, or near the Gulf of Mexico. Further, the gradual but nevertheless rapid change in the eating habits of the American people, especially since the war, make it plain that vegetables and fruit are to be the predominating factor in our diet. A 400 per cent increase in the amount of head lettuce, for instance, during the past 10 years shows how the wind blows.

Q. Now, you have already given the figures for certain years of the increase in your company's sales. I wish you would give the amount of the growth sales in 1910, if you have that figure? (1672.)

A. In 1910 there were 10,000. In 1913 they had increased to 18,000. In 1916 they had increased to 20,000. In 1919, 36,000. In 1925, 55,000. And in 1927, 79,000.

914 Q. In a number of sales in the 20 years from 1889 to 1909, what was the number of separate sales that you and your partners made?

A. The volume was $7,000. From 1909 to 1919 the volume was $36,000. From 1909 to 1928 it was approximately $80,000. (1673.) I do not mean that the aggregate for 9 years from 1919 to 1928 was $80,000. I mean from that period they increased from $36,000 to $80,000. That is per annum. (1674.) I estimate our sales for 1928 would be $85,000 to $90,000.

In Lane County there is a considerable production of outdoor crops but none of any size inside. There are small producers, other than our company, in Lane County, with operations under glass. Generally speaking, I think the soil, climatic, and water conditions in

Lane County are very suitable for a large production of outdoor vegetable crops. There is a large body of land of the tupe that is used for crops of that kind, there is the water supply that I speak of, and there is a considerable production for cannery crops at present, much the same crops. It is largely a matter of the market. Vegetables at the present time are being canned in Lane County. (1675.) The chief crops are carrots, beets, string beans, cabbage, things of that kind. Not all of the land in Lane County is suitable for production of vegetables has been devoted to that use. The production of vegetables for shipment in the way I have described or for canning, is susceptible of extension and considerable expansion in Lane County.

With the construction and operation of the proposed cross-State line we expect a material increase in our business, largely, we think, from southern Idaho, Utah, and east. Our markets are much better developed in the northern section of the country, Montana, for instance, and Washington.

915 Q. Are there desirable markets that would be tributary or be reached by transportation over the proposed cross-State line into which you are not selling and shipping at the present time, in your judgment?

A. That would depend upon the development of the country through that section. Any of the eastern Oregon and Idaho sections are good markets, wherever there's people enough. (1676.) Without exception it has been my experience that as new transportation facilities become available our opportunities for increasing our production and our sales increase likewise. I see no reason why the same result shouldn't follow from the construction of the proposed cross-State line.

Cross-examination:

The carload business that we shipped was handled by brokers. I think it went east, probably into Chicago. The ones I mentioned was head lettuce. It moved over the Southern Pacific. I do not know whether it went through the Portland gateway or whether it was routed through Roseville and Ogden. (1677.) I have no details of that. I did not route it. I have never routed any carload shipments. I ship very little by carloads. That shipment was perhaps 4 years ago. I haven't shipped any carloads since.

Q. Now, you spoke of the advantage accruing to you from the construction of the line through connecting up with Klamath Falls. Did that advantage result from consumption at Klamath Falls, or from better availability to California markets?

A. Well, it is both. Klamath Falls is quite a market itself. Their season is entirely different from ours. There is no production down in there of that class of products, and the

916 only competition you have is from southern outdoor crops, and there has been increased consumption there as well as in San Francisco and Sacramento and those districts. We ship into Los

Angeles, but not in any considerable quantity. We ship there through the spring months, from February to April (1678), I should say. We ship to southern Idaho points; to Pocatello, Boise, in through there. We begin in April, shipping through till June, perhaps. That is by express. Transfer would be necessary in fresh shipments. We would have an advantage over the present line to southern Idaho points with the cross-State line as it would be shorter. The shortest line always affords the best service with fresh vegetables.

Q. Well, it doesn't if you don't make the time, does it?

A. It would depend on your transfer. Outside of your transfer it wouldn't make any difference—the matter of hours intervening.

Q. Now, if there was a mixed-train service across central (1679) Oregon, and through limited service from Portland to Boise, if Boise was the destination you would ship by the limited service, wouldn't you?

A. It would depend just on which took the greatest number of hours to get in there. It is time and service, rather than distance.

Population and markets is the problem in the matter of the disposition of produce generally. Without demand there isn't any advantage in rates.

Eugene has grown quite extensively in the last several years. (1680.) I imagine the university has a thousand more students than they did have 4 or 5 years ago. I understand they have there
917 around 3,000 students. That makes some difference in population added there. The local business is a very small factor of our business, and the percentage of the business done locally is constantly decreasing. Certain times of the year around the bay there, California and Sacramento and that district take larger shipments of cucumbers than any other district, but take the year as a whole this State and Washington provide a greater outlet.

We do not ship very much to the Yakima country. We ship into Walla Walla. Spokane is a large market. It is all hothouse stuff that we ship to those long distances. (1681.) The last year or so we got some movement into Utah. It has been rather stiff competition with eastern producers, however. They don't produce locally there to any great extent. Climatic conditions to some extent accounts for that. The climatic conditions haven't proven to be more favorable there for the raising of this product than they are around Illinois, Indiana, and Iowa.

The shipments that were sent to Utah were routed through Portland, then east into Idaho, and down into Utah.

PERCY M. MORSE was thereupon produced as a witness on behalf of complainants and, having been first duly sworn, testified as follows:

Direct examination:

I live in Eugene (1682), in Lane County. I was elected as county surveyor, and appointed as county engineer, market road engineer of Lane County. I am a civil engineer by profession. I

have practiced that profession 29 years, the entire time in the State of Oregon. I have been in railroad employ. I was employed
918 seven years with the Oregon-Washington Railroad & Navigation Company, in relocation and reconstruction and maintenance of way. I was with the Southern Pacific three or four months only, I think. (1683.) That was on the main line through the State, south of Portland, of course. That work was more in the nature of making connections to section owners, replacing maps destroyed by the Southern Pacific fire.

I have been working as county surveyor and county engineer of Lane County for 12 years, so that I think I am pretty familiar with all parts of the county. There is very little of it that I haven't been over.

As to the approximate standing timber resources of Lane County, I can only take the Government reports or viewers' reports—there's approximately 65 billion feet, supposed to be, standing timber in the county. A good deal of that timber is in Federal forest reserves.

Q. Have you made an examination of the country from an engineering standpoint, with a view of ascertaining the (1684) practicability of locating the line of railroad from Eugene to cross the Cascade Mountains and connect up with LaPine, Oregon, on the east side of the mountains?

A. Only as far as the summit, the eastern boundary of the county. East of the summit I am not familiar with the country. I have a map with me that would indicate the approximate location of the proposed route. It is a copy of the Cascade National Forest service map.

Q. Is that the name, Cascade National Forest, of the forest in which the standing timber is located that belongs in the Federal forest reserves, so far as they are contained in Lane County?
919 A. Cascade National Forest. We have the Siuslaw, in the western portion, then some of the Umpqua, in the southern portion. There is standing timber in three separately named national forests in Lane County. Eugent is located just about the center of Lane County. The McKenzie River (1685) flows from the eastern portion to the central portion of the county, where it joins the Willamette. It joins the Willamette just two or three miles north of Eugene.

The route that I went over as an engineer with the idea of ascertaining the practicability as location for a railroad commenced at Eugene or Springfield on the west. From Eugene it went easterly, following the McKenzie River Basin, to McKenzie Bridge. From McKenzie Bridge it left the main McKenzie River and followed a branch, the Horse Creek branch, in a southeasterly direction. It continued that direction until it would reach the (1686) summit of the Cascades near Elk Lake. From Elk Lake it went more in a southerly direction, but still bearing to the east. It would be about 60 miles along the proposed route from Eugene over to the summit

at or near Elk Lake. As to the practicability of that route from an engineering standpoint for the location of a line of railroad, there are no unusual features that would make a railroad location excessively extensive or impracticable. It would be the usual mountain construction.

Q. What timber resources in Lane County would such a line of railroad, if built, serve? Would there be any timber to speak of adjacent or tributary to such a line of railroad, if built?

A. It would be through all the McKenzie Valley holdings;
920 yes, there would be a large amount of timber. The timber tributary to that proposed line is not now served by any existing line of railroad. Some years ago the lower portion of it was logged off by water to Eugene, but—(1687.)

The suggested terminus of the line I mentioned on the east side of the mountains was somewhere in the vicinity of Lapine, in Deschutes County, near the southern portion—near the southwestern portion, near the southern boundary line. In my judgment, I believe there is a feasible route for the construction of a railroad following substantially the route I have indicated between Eugene and LaPine, Oregon, in Deschutes County. (1688.) That route would tap extensive areas of timber west of the Cascades. I am not familiar with it east of the Cascades. I know the location of Crescent Lake. LaPine would be 10 to 12 miles from the route of that proposed cross-State line.

Cross-examination:

The route I have referred to is commonly known as the McKenzie Pass as far as McKenzie Bridge. From there it would follow the Horse Creek branch. There would have to be a development to get a grade suitable for railroad there. (1689.) I went into no details at all about it. It was just a general survey of the country. The distances are such that before you reach the plateau, that the development I believe could be made for a suitable grade. I had nothing but a barometer with me. That was all I used in getting the heights.

I think we can still use up to one or one and a half per cent grades for a main line. I believe they could get a one and a half per cent grade on the route I have been discussing. I don't believe
921 that the cost would run greater than the Natron cut-off cost. The cost of that was pretty large, but they built it. (1690.) The Natron branch was built to handle the north and south traffic. That is very heavy traffic. It is taken from the Siskiyou route and put through this Natron route because of the very substantial economies resulting on that operation. (1691.) It carries the traffic from Oregon and Washington. It was the heaviest traffic that they have. Now I am not qualified to state as to the comparative heavy traffic of the roads here or east, or anything of that kind.

I have been railroading here in the State a good many years and have been a citizen in Eugene. I know there is quite a heavy traffic on the Southern Pacific between Portland and San Francisco.

I personally believe that the line across the State would take a good deal of that traffic that now goes south. The Cascade route, so we have been advised, cost $300,000 or more a mile for miles there between Eugene and Crescent. I don't know. (1692.) I have been over the route. There are tunnels and cuts and rock work; one series of very expensive construction.

Q. And isn't this McKenzie Bridge route considered an even more difficult route than the Natron route that was taken by the Cascade construction?

A. I don't want the commission to think that I am advocating the McKenzie route in comparison to the Natron route. All that I cared to testify was that it was a place that a road could be built to serve as an outlet. There was no examination made to determine the cost or the grades that are possible to be made.

922 It was simply a view of the ground to see whether there were any unusual or outstanding features that would prevent the construction of a railroad.

Examiner ROGERS. Do you know whether the old Siskiyou line had reached its maximum density of traffic that could be handled over that line when the Natron cut-off was built, so that the Southern Pacific simply had to build another line in order to handle the traffic, or was it built simply as a matter of decreasing transportation costs?

A. I would not feel qualified to answer that.

Q. (By Mr. SPENCER.) Now you say there are no unusual (1693) difficulties presented by this route, as I understand you?

A. Yes, sir.

Q. Now every route through the Cascades presents unusual and serious and very expensive difficulties, except perhaps the Hogg Pass, doesn't it? Is there any mountain pass in the West that is as expensive to accomplish as a pass through the Cascade Range?

A. None that I know of. They are all expensive.

I am familiar with the territory in the vicinity of Crescent only in a generay way, on the railroad and in the immediate vicinity. If the proposed line was constructed from Burns to Crane on the east to a point in the vicinity of Crescent on the line of the Southern Pacific, I believe it would be practicable to locate such yards and whatever would be necessary at some point along there. There are yards at Crescent now.

As to whether that is a terminal point, or a division (1694) point on the Natron cut-off, I could not say. I am not familiar with their operation.

I believe it would be practical to put in a yard in the vicinity of Crescent, not necessarily at Crescent.

923 Q. Well, the extent of the development there at Crescent consists of two or three tracks parallel with the main line, doesn't it, and a two-stall engine house?

A. There are other places, though, not very many miles away, where they could develop yards.

There is a great deal of snow there. I know of the snow on the Blue Mountains at Kamela Hill. I did not think there was three or four times the volume of snow here on this Cascade line that there is over there on the Blue Mountains. (1695.) I don't know personally.

WARREN D. SMITH was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct examination:

I live at Eugene, Oregon. I am a geologist. I am now (1696) head of the Department of Geology and Geography at the University of Oregon. I have been on the faculty of that university since 1914, with the exception of two years I was absent. I received my academic training at the University of Wisconsin, Stanford University and University of Chicago. I received my doctor's degree from the University of Wisconsin.

As a geologist I started out as assistant on the Wisconsin Geological Survey, and then I went to the Philippine Islands and was geologist and chief of division of mines there for 10 years; and then I have done a consulting work with the metropolitan water district in Manila, for the various mining companies in the
924 Philippine Islands; and then in this country for the Southern Pacific, for the Union Pacific, for the Oregon Portland Cement Company, for the United States Reclamation Service, and other smaller concerns. (1697.) I have been in China and made a half a dozen visits to Japan, parts of Borneo and the East Indies. I have observed economic conditions in China and Japan to a certain extent. I was in the Philippine Islands nearly 12 years. I made six visits to the Hawaiian Islands.

I have been in every county in the State of Oregon, over every important road in the State, railroad and highway and trail, and some parts of it I know in considerable detail, other parts only by reconnaissance.

As a geologist, it has been my work since 1914 to give particular attention to the geological structure of the State of Oregon. The ascertainment of surface and subterranean water resources within the State is one of our chief interests, the study of structure conditions of the State which would determine artesian (1698) basins. In fact, you can't do that work without a knowledge of structural geology.

Q. Have you been through the portions of the State generally speaking between Crane, Oregon, in Harney County, and westward across there over to Crescent Lake in the Cascades on the west? Have you been to that part of Oregon?

A. I have been through along practically all of those roads. I haven't followed that proposed line throughout, but I have crossed it in various places. I am familiar in a general way with the geological structure and the topography of that portion of the State,

so far as they have been ascertained, the sources of subterranean water supply in that portion of the State, but am not familiar with it in a detailed way, though I have access to the literature.

925 On some of that work we have more detailed information. I have examined and read such literature and think I have most of the information that is available on the subject. I have been through the region in north central Harney County, in northern Lake County, and in the northeastern portion of Klamath (1699) County, and I have material on that region.

My work as a professor in the University of Oregon, and geologist, give me information with respect to soil values or soil characteristics of the soil on the surface of the earth along in that general territory. Soils are all due to the break-up of rocks.

Q. Well, what, generally speaking, would you say of the soil conditions as you have observed them in that territory between Crane on the east and Crescent Lake on the west, of north central Harney County and northern Lake County and northeastern part of Klamath County, with respect to fertility and the ability to grow crops if supplied with water?

A. Well, we have three main types of soil in that region and the region to the south. There the soils on the lake basins, like in the Silver Lake country, we have the soils of the High Desert. Those are mainly adobe soils and not much good; though on the High Desert there are some good soils which if water were accessible would be fertile. Then we have in the western portion, somewhat to the south of this proposed (1700) line, but you do get into a certain amount of it even where the line would cross—you have a large pumice area, which is not very attractive and could hardly be made attractive. It is too porous. That material came probably from the explosion of Crater Lake, and that is marked by the presence

926 of juniper as the principal type of tree. As to what extent of this total area of this so-called desert consists of soil that could be made fertile if water was available, I made no calculations on that, and I could merely make a guess now. Probably with water maybe 30 or 40 per cent.

Q. (By Mr. McCulloch.) Dr. Smith, could you give a more or less general but summarized statement of the topography conditions and the geological structure of the State generally speaking along the line of the proposed route of railroad between Crane on the east and Crescent Lake on the west?

A. That portion of the State is covered by what is generally known as the Columbia lava flow. It is one of the largest lava flows in the world. This lava flow, or series of flows, not just one flow, has been subjected to some folding and faulting, so you have a region there of great undulations in these lava flows with occasional breaks. Those are more noticeable to the south, and there are several places where you can see the material underlying the lava flows, which is made up largely of a volcanic ash, comparable to the famous (1701)

John Day ash beds in the John Day Valley. Now in these depressions caused by the faulting, where one block has dropped down and another stood up, there have been lake-bed accumulations. Those are the fertile areas of eastern Oregon. I would say, in general, that the region is generally misrepresented on the maps. It is rougher than it appears to be. A great deal of the surface of this country consists of lava rock, and a great deal of it has been covered by later accumulations of lake-bed deposits, and then in many places this lava has disintegrated and produced a residual soil. It is not bare rock, except in places. In places there is a lot of bare
927 rock, but in other places you will have quite an accumulation of soil. (1702.) In the main the soil has been the residum of disintegrated lava rock, or transported soils brought down by the streams and deposited in these depressions.

As to information respecting the water resources or the subterranean water resources of this territory, we haven't a great deal of data, but such data as we have indicated that it would be possible, if the proper development work were carried on, to develop ground water resources here 10 times what are now available. But that would be a large-scale development, calling for a State program.

In the Fort Rock country several wells were drilled a few years ago. I haven't paid much attention to this section the last three years, so my information is not of the latest on that. But there were several wells in there around 220 feet deep, one of which yielded 1,000 gallons a minute. Now there are very shallow wells, and I am thinking of a kind of development where wells will go down to 2,500 and even 4,000 feet in depth, as they do in Australia. Then we would get an adequate supply of water.

Q. There has been testimony in this record, Dr. Smith, referring to these wells in the Fort Rock Valley, and the extent to which (1703) they have been used for watering livestock and for the irrigation of tracts running from 80 to 160 or 200 acres of land immediately adjoining them. Do you believe, from the information to which you have had access and the personal observation you have made and your knowledge of the geological structure of this central Oregon county, that the procuring of water from these com-
928 paratively shallow wells you have described, drilled to a depth of between 200 and 300 feet, is generally practicable?

A. Yes. But I don't think they would be adequate, the shallow wells. It is my judgment as a geologist that generally throughout that territory water, at least to the extent obtained in the Fort Rock Valley, might be obtained by drilling some other wells. In other sections farther south, in the Goose Lake Basin, why, they have put in a number of wells since the Fort Rock development. They have got considerable water. There are other sections in the central Oregon country where water could be procured by drilling comparatively shallow wells. The whole of southern Harney is a potential artesian basin. There is a small basin east of that in the White-

horse (1704) region, east of Steens Mountain; there is the whole Goose Lake section, which is not fully developed yet; there is a Silver Lake, of which Fort Rock is a part; and there is a little basin over near Drewsey. Now that is east of the region we are talking about. In my judgment, I consider that the development of the subterranean water possibilities of this territory in central and south central Oregon and southeastern Oregon has hardly begun.

It is my thought that by drilling a 2,500-foot well or a 4,000-foot well, going deeper a flow of water will be struck that would make it unnecessary to pump. I think there are places where they could get artesian flows. For instance, if you go down the Deschutes Canyon, at several places you can see enormous springs, Opal Springs is one of those, where water comes out of there like out of a huge sewer, a tremendous flow of water. The Deschutes is fed largely from such springs, and that whole of eastern Oregon
929 is, in my opinion, at least a large part of it, underlaid by water. And it is a supply that is constantly being fed from the snows of the Cascades chiefly, and I think it can only be reached by deep wells. I think there is a possibility in several of those basins of striking such a flow of water. (1705.) I would not say in every one. It would be expensive. But when they go down in Australia to 7,000 feet to get water, and there is no other way to get it—you can't lift it out of the Snake River or the Columbia River at any price—why, you might have to go down with a well. I can only guess at what the expense would be, as we have no data in the State. We have some reputed oil wells in the State that have gone down 4,000 feet, where they have sunk a lot of money. To sink an oil well 4,000 feet costs somewhere around—it depends entirely upon the terrain, upon the local conditions, labor, and such costs—$100,000, or it might run up to $150,000; it might even be less than that.

Q. (By Mr. McCulloch) Dr. Smith, if a well such as has been put down in the Fort Rock Valley will produce an adequate flow of water for watering large herds of stock, and in addition for the irrigation of alfalfa and other crops for areas from 80 to 200 or 240 acres each, what in your judgment would be the areas that might reasonably be irrigated from the flow of such a deep artesian well as you had in mind, assuming (1706) that one of these shallow wells of 200, 225, or 250 feet will irrigate from 80 to 240 acres?

A. I would not want to testify very definitely on that, as I haven't specialized in that subject. I would say this: That such water should be used mainly for watering stock. That is the way they use it in Australia, and not for irrigation. I think that
930 is a waste of water. But I would say this: You ought to be able to irrigate a considerably greater area than you can from these shallow wells.

As to how, in my judgment, the flow from one of these shallow wells would compare in volume with the flow from such an artesian well as I had in mind, the flow from real artesian wells would be

much greater. That depends upon what you strike, the water stratum, and under what pressure it is, the depth and the structure conditions there, and so on.

Q. Dr. Smith, if the use of water in this south central contry in Oregon and southeastern Oregon from wells were confined to human consumption and the watering of stock with a limited use for irrigation on comparatively small farms, 80 to 200 acres, in your judgment would there be any necessity for the drilling of very deep wells to procure an artesian flow, provided you could get a lesser amount of water for those (1707) restricted purposes from wells from 200 to 300 feet deep?

A. It is just a matter of getting more water or less water. If you are satisfied with a small amount of water, why, they will use the shallow wells. But I am thinking of the greatest possible development of the State in that region, and that can only come about through the boring of deep wells. But you can get a good deal more water than is now gotten from these shallow wells. Nothing adequate in the way of drilling deep artesian wells has been undertaken in this territory. The State began some development in the Fort Rock country, and then, through a reputed program of economy, which I consider to be parsimony and not economy, the State abandoned the work.

Q. In your judgment is the geological formation of this central and south central and southeastern portions of the State such that water and subterranean sources of water can be
931 found in substantial quantities and to a substantial extent by the drilling of wells, either the shallow type from 200 to 300 feet or the deeper artesian wells?

A. That is my opinion, that that can be done and is being done in certain sections now.

I am familiar with the substance known as diatomite. (1708.) I have visited the Harper deposit in Malheur County. Apparently that deposit is extensive. I have made no detailed survey, but the short examination I did make, which was just about a day, convinced me that the quantity there was almost unlimited. As to its quality, that could not be determined without a detailed examination, which I did not make. That deposit was being mined and shipped when I was there. I heard the testimony of Mr. Shelton this morning that diatomite from Harper was used by the Eugene Concrete Pipe Works. That is one of the possible uses of diatomite. To what extent it is being used I don't know. As we call it, diatomite is a rock formation consisting of the remains of diatomes. Chemically the material is about 90 per cent silica, SiO_2, with a small amount of (1709) alumina; that is, Al_2O_3, aluminum and oxygen. All the other ingredients are less than one per cent, even less than a half of one per cent. The color is sometimes a dead white to cream color, depending upon the amount of iron present. Any appreciable amount of iron will color the material. This material at Harper is almost pure white; in places it is dead white, because it has a very

small percentage of iron. It is light; it varies from around 20 pounds to 35 pounds per cubic foot; that is, it is less than water, and that is largely because of the pore spaces in it. It lies in stratified form, and where it has no overburden it can be quarried with
932 a steam shovel. The material can be sawed or shaped into blocks.

The uses of that material in industry are growing very rapidly. There are something over 100 different uses at present. The principal uses are, and the way it is used by this Eugene company is, to strengthen their cement and their concrete. If you add 10 (1710) per cent of diatomite to your concrete mixture, you will increase the strength of your cement about 24 per cent, I am told. I have not made any examination of that myself. That is one of the uses. Another use is for filtration; filtration of oils, filtration of sugar, the clarification of any substances, liquid substances you want to get the impurities out of. Also one of its chief uses, in fact I think its chief use to-day is for insulation in refrigerators, fireless cookers—any number of places where insulation is the object sought. It is exceedingly refractory. You can't make any impression on it with a blow torch, for the simple reason there is nothing there to burn. I am told it is adaptable and is used for the manufacture of such commodities as face powder, polishes, and that sort of thing. I don't know much about face powders, but I should think it would make a good face powder.

Q. Do you know, Dr. Smith, whether there are industries on the Pacific coast, either in Oregon or California, that have occasion to use diatomite in their operations in addition to this cement pipe works at Eugene you mentioned?

A. I know there are a number of industries that use this material and are planning to use it more. I think on (1711) the coast, however, it is still an infant industry. As to whether it is used in the process of refining sugar at the refineries on San Francisco Bay, I don't know about that.

With the growth of diversified manufacturing industries in
933 the Pacific Coast States, I should certainly expect an increasing westbound movement of this diatomite. (1712.)

As to the general topographical features of the country, particularly between the terminii of this proposed line of railroad here, and the character of the country that it runs through as I have observed it in my trips through that country: It is a high plateau, the service of which undulates. There are occasional breaks in it. These breaks are not as large as they are to the south, but there are breaks or canyons. The canyons are not as large in this portion as they are some places to the north and the south. The general elevation is from 4,000 to 5,000. We have the basins around about 4,000 feet, and the high desert, something over 5,000 feet.

Q. As you have observed the country along the route of the proposed line of railroad across the State, are there any decided or sharp breaks in elevation, such, for example, as would be encountered

in a railroad built across the Blue Mountains or across one of the Cascade Mountain passes?

A. Nothing of that kind.

Q. I would like to have you take up, now, please, the opportunities as you have observed them in Oriental markets—when I say that, I will include for the purpose of the question the Philippine Islands, as well as Japan and China—(1713) for products now produced in the State of Oregon?

A. From my knowledge of Oregon I consider that Oregon will ultimately be known as a dairy State. The dairy interests have only begun to be developed, and the one great produce or commodity that might be shipped to the Orient in addition to lumber would be various dairy products. The Orient is conspicuously lacking
934 in dairy products, for two reasons; there is no adequate need for cattle in the Orient, with the exception of Indo-China, and the herds in that part of the world, such herds as there are, are subject to all sorts of diseases. It is almost impossible to maintain a dairy herd in the Philippine Islands. A quart of good fresh milk costs about a dollar in the Philippine Islands. I paid 50 cents a quart for it several times, and some places you can't get it for a dollar. Now, one thing that the Orient needs is milk and butter. The people there are largely under-nourished. Sixty per cent, I believe, and in some cases it has been stated as high as 70 per cent, of the infants born in the Philippine Islands die before they reach the age of one year, and it is largely through lack of nourishing food. I have seen babies fed on condensed milk that was almost sugar, where the baby got too much sugar, and the child died of inanition, and hundreds of thousands of lives could be saved in that part (1714) of the world if they had a good food supply.

The same thing applies, to a certain extent, in China and Japan, and there is a great potential market for dairy products of Washington and Oregon. A lot of this would come from western Washington and western Oregon, but a great deal of it could also come from eastern Oregon and eastern Washington.

Q. When you speak of the dairy products in the Orient, so far as milk is concerned in what form did you have in mind that milk might be supplied to the Oriental markets from Oregon?

A. It could be supplied the way it is now being supplied from Switzerland. The chief brand of natural milk, not condensed, that is in use in the Philippine Islands is Bear Brand milk,
935 which goes into the Philippine Islands under considerable transportation charges, paying duty, from Switzerland,—goes into one of our own dependencies, where the same thing could be shipped from America without duty, and that business isn't touched by American producers. I used that milk for nearly 12 years, carried it by the case with me on my travels. That came from Switzerland. It is a natural milk, and we could put up the same article in this country and get that business if we went after it.

Q. In your judgment, are there possibilities for the development of extensive markets in the Orient for milk and butter (1715), and perhaps other dairy products, such as are produced in the State of Oregon?

A. Well, to show you what could be done, the boat I came back on in 1922, one of the Admiral Line boats, carried fresh milk, frozen, from Seattle for the voyage out and for the time it expected to be in those Oriental ports and the return voyage, seven weeks. They couldn't get it across on the other side. You can get fresh vegetables over there, but it is a very dangerous matter eating those articles on account of amœbic dysentery; owing to Chinese method of agriculture, where they fertilize human waste, you take your life in your hands when you use those vegetables. Every fresh vegetable we used in the Philippines had to be boiled or scalded with boiling water.

As to the possibilities of Oriental markets for hay and feed for animals, such as is produced in Oregon, I don't know what the situation is at the present time, but when I left the Philippine Islands every bit of hay and all the oats and all the grain used by
936 American Cavalry horses (1716) had to be shipped over under considerable expense, because you can't get that over there. You can get a certain amount from Australia, but not much, because Australia hasn't much feed of her own.

Q. Now, Dr. Smith, in the line of your work as Professo rof Geology and Economic Geography in the University of Oregon, from your observations, in your studies, and travels throughout this State, have you formed any conclusions with respect to the desirability in the public interest of the railroad connection that is the subject of this proceeding, and particularly the relation that that railroad development, when completed, would have upon the general development of the State? If you have, I wish you would state them in your own way.

A. Well, I would say that increased railroad facilities would benefit the State, and this particular line, or a line somewhere across central Oregon, would be very desirable, and it would certainly benefit the community in which I live very greatly. My entire testimony is given in the interests of the State of Oregon. In my opinion, the building and operation of this (1717) railroad across the State would unquestionably contribute to the development of the resources of the State.

Cross-examination:

Q. (By Mr. SPENCER.) Well, Doctor, it wouldn't contribute if it wasn't used, would it? It wouldn't contribute to development if it was connected up there at Crescent Lake and no one made any considerable use of it? It would be a waste, rather than a constructive instrumentality is that right?

A. Well, I can't think of it not being used to a certain extent, but certainly if it were not used very much I don't see how it would
937 hurt the State as a whole. It might hurt certain individuals or certain organizations. I don't think this line should stop on

the east side of the mountains. I am thinking of a line that comes clear across the valley and connects with the coast. (1718.) I am not figuring on any competition. I am just figuring on a railroad. I can think of a situation where there might be the proper kind of cooperation between those railroads and still have a line across central Oregon. I don't know how that would be effected.

Supposing that under the transportation act the railroads were to be consolidated and there would only be one line in the State of Oregon, I would still believe that the cross-State line would benefit the State. You have got a vast territory there that isn't served at present, and an additional line, if it could be built so that those building it would benefit, why, it certainly would serve the State. As to whether there should be a merger or not, I don't care to express an opinion on that.

Q. (Mr. SPENCER.) What I wanted to develop is whether or not, in your opinion, you have in mind the construction of a railroad stopping out there at Crescent Lake, in order to develop (1719) central Oregon, the use of the line to be local between Crescent Lake and the East, and depend upon what it could get from local development and what it could bring to western Oregon from southern Idaho.

A. Well, as I expressed the opinion earlier, and as I expressed the opinion to you personally once, I think, I think that if it had to depend upon local business for some time to come it wouldn't pay. I am thinking of a line that would go clear through. It is my opinion that it never could pay unless it had western Oregon business. I didn't mean for all time to come that "it never could pay," because I couldn't say that.

938 Q. (By Mr. SPENCER.) Well, you have had a line now into the best part of the area between Ontario and the Cascade Mountains for 15 or 20 years—extending from Ontario to Crane, and then later to Burns.

A. Well, I don't consider that the best part of that country. I think the best part is around Silver Lake, the Fort Rock country, and to the south of that. I consider that better than around Burns. (1720.) I think there are greater agricultural possibilities. That is just an opinion.

We have a great expanse there in the Silvies Valley and in the Blitzen Valley. I have in mind the country around Silver Lake. To the north of it, and south and west of it. To the south and west of Silver Lake there is some timber.

Q. Now, the big area in the country north of Silver Lake is what is known as the Christmas Lake Valley, and the Fort Rock end of it is the west end of Christmas Lake Valley, and it is a desert area now for all intents and purposes, isn't it?

A. But it needn't remain so. Exploration has to be made to determine whether it would be made so or not. (1721.) I wouldn't say that that area could be reclaimed by a lot of small wells 150 to

200 feet deep, or 250 feet deep. I have expressed the opinion that those wells should be deeper, though a great deal can be done with the small wells. There is a lot of country around Lakeview that is served by very shallow wells, anywhere from 150 to 200 feet deep.

Q. Well, the Lakeview irrigation project, though, has been a success, hasn't it? That is a big project, isn't it, compared with these central Oregon projects?

A. Oh, there are a lot of small independent farmers down there that do their own irrigating from wells.

939 As to whether the big production in the Goose Lake Valley is from that Goose Lake irrigation project, I am not certain of that.

Q. And that country has had great difficulty in sustaining a branch line railroad, hasn't it, although it has got the advantage of the San Francisco market?

A. I don't know to what extent that road has paid. I have no information on that.

Q. Now, these deep wells that you speak of are what you have in mind for reclaiming that Fork Rock country and Christmas Lake (1722) Valley. Now, isn't it true that some of these artesian wells don't flow a substantial volume so as to irrigate any considerable area for any considerable distance from the mouth or outflow of the well; that is true, isn't it?

A. Occasionally you get a dry hole, and sometimes these wells run out of water.

The irrigation I have in mind is from a strong producing well sunk to a substantial depth. I wouldn't say that is the only constructive program of that development, but that is the one that I would favor. I would say that the deeper water must be there if it is to sustain or reclaim that area. The logical thing for a business program would be the sinking of one of those wells to large depth to ascertain whether water is there or not.

Q. Now, I believe that you said that—or did you estimate the depth at 2,500 to 4,000 feet?

A. Well, I am going on what I know about wells in other parts (1723) of the United States and in Australia. It is possible to go down to 7,000 feet. The average depth of well in Australia, I believe, is around 2,500 feet. It would depend entirely on the

940 local conditions as to where you struck water. I would want to go until I struck the water. You have struck water when you get the water coming up out of the ground.

Any development over there in Christmas Lake Valley must compete with gravity irrigation projects.

Q. And, in your opinion, could that be effectively done unless you had a considerable number of strong flowing artesian wells?

A. Well, the point I wanted to make there was that there are (1724) certain areas in that region that can not be supplied with water in any other way than by these wells. As to whether that is true

of the entire Christmas Lake Valley, I am not willing to say that. I haven't made that close a survey of Christmas Valley. A survey is absolutely essential before we can determine what should be undertaken over there. What should be done, the State should make a geological survey of that whole country and determine. There has been something done in that line near St. Mary's, even, but more needs to be done. The United States Government made a preliminary survey as far back as in the early 'nineties, and then they made around 1907, '08, and '09, in Harney and Lake Counties, so we have some information to go on, but that should be followed up now with more detailed survey and actual borings. (1725.) We have two main reports. We have a report of Professor I. C. Russell, who is now dead, former professor of geology in the University of Michigan. He was sent out by the United States Geological Survey in the early 'nineties. Then we had reports made by Gerald Waring; two papers, one on Harney County, one on Lake County, on the water resources. Then the State bureau of mines and geology was making detailed examinations and sinking wells in the Fort Rock country about six years ago; when the State bureau was abolished, work was interrupted.

941 Those investigations showed pretty conclusively that there were artesian basins and the water could be reached. And then I have better information than any of that from well drillers in Lake County, one of whom was a student of mine at the University of Oregon, and he has sunk a number of wells—no deep wells, but anywhere from 100 to 300 feet, all through—well, north and west of Lakeview, and have got water even in areas that the Geological Survey thought were doubtful. They are practically all pumping wells. (1726.)

It is my opinion that so far as this central Oregon country is concerned the first consideration is water before it can succeed. I think a railroad would help those people out while they were getting water. A good many people have left that region for the lack of water. They have left some of the high desert, and some of the lower country. I don't think they have practically all left the Christmas Lake Valley and the Fort Rock country. Most of the people that have left there were on the high desert. There were hundreds of homesteads out on (1727) the high desert, went in there about 1915, and nearly all of them got out. That is all through south central Oregon, east of Christmas Lake, and some west of there, and some south.

Juniper, as I have found it, has been confined to the poorer soils. The main juniper growth, as I found it, is in the region just east of the Cascades, north of Klamath Falls. You get juniper, scattered juniper, all over eastern Oregon, and the big juniper area is in the region of the pumice. I wouldn't say that soil is impossible as far as being productive is concerned, but even with water that pumice soil isn't as good as other soils.

As to whether there is a very extensive stretch of this juniper in hardpan soil for thousands and thousands of acres in
942 the easterly portion of Christmas Lake Valley, I don't know about that. (1728.) I haven't been through there making any detailed survey. I made an estimate that perhaps 30 to 40 per cent of that central Oregon country might be made productive. I don't know whether it would be that high at present.

Q. Now, you proceed from the north end of Goose Lake Valley, at a place where they call Valley Falls, isn't it, where the roads fork, one goes up to Bend and the other goes over to Burns, a so-called road? Now, on that road, as you go over to Burns, you wind around through great upheavals of soil and rock that doesn't grow anything, don't you?

A. There is a lot of unproductive country on that road. I wouldn't say that there is no possibility of cultivating there for a distance of 60 or 70 miles, from Valley Falls, until you get over there near Mr. Hanley's Double-O Ranch. It would be different to produce there as compared with the rich silt soils along the Snake River Valley.

Q. A good deal the same condition obtains as you go over toward Bend (1729) from this country down there at the head of the Goose Lake Valley, isn't that true? You have got a little strip of land there that——

A. There is some of it, some of it in there, but there's a good deal of that that is being reclaimed now. There is quite a little strip of land around Silver Lake, 4,000 or 5,000 acres, perhaps, there is the Chewaucan and the Paisley Valleys, with water on them. Those are the chief areas. I think these are south of the cross-State line.

I consider the Harney and Blitzen Valleys pretty good valleys. That country around Silver Lake isn't barren, it isn't unproductive. It is limited. So are the other valleys limited. (1730.)
943 I don't know about the proportion as to the acres in Silver Lake and Harney Valleys. Blitzen Valley is larger.

Some of this lava soil isn't good. The 'dobe part of it isn't good, but the residual soils, where it is thick enough and you can get water on it it is excellent. There's some places there is no soil at all, but if you can get a couple of feet of soil and get water on it you are all right.

At times north of Silver Lake the winds are very violent.

Q. And they roll this soil from one end of the Christmas Lake Valley to the other, pretty near, don't they?

A. Well, you can't roll that play soil for any distance. In some places there is considerable movement of the soil. (1731.) But that isn't so very serious. If you would cultivate it properly it wouldn't matter.

I made an examination and a report on Alkali Lake.

Redirect examination:

I am not acquainted with the character of the soil around the irrigation projects near Irrigon, Oregon, Hermiston, and those projects.

I don't recall so much juniper around the Bend and Redmond section. The big growth of juniper, as I remember it, is south of this proposed cross-State line, towards Klamath Falls. (1732.) In my testimony I meant to say that we find juniper on our poorest soils. In some cases it is simply due to lack of water, but in other cases it is the type of soil, regardless of the water. The finding of juniper trees in an area doesn't necessarily indicate infertility.

I don't know of any extensive areas of pumice soil along the proposed route of the cross-State railroad.

944 For the proper development of this central and south central and southeastern Oregon country I think that the water is the prime essential. Next to that is transportation. To have a proper development of those sections you have got to either have rail transportation or some substitute. At the present I know of no substitute in those portions of the (1733) State of Oregon for rail transportation. Very difficult to get through there now on account of the lack of highways. To a certain extent a highway would be a substitute for a railroad. It is a substitute in a good many parts of the United States, putting the railroads out of business. In saying that I don't think it is a matter of passengers. It is a matter of moving supplies, commodities, in less or greater than carload lots.

Q. Well, what I was getting at was this, Dr. Smith, do you know of other sections in the United States where such commodities as lumber, iron and steel articles, grain, livestock, coal, are successfully handled in carload quantities (1734) by motor truck, or would you expect the movement of grain, lumber, livestock, and such commodities as that, in carload quantities, to be practicable by motor truck over any system of highways?

A. I know places where they are moving quantities of steel and lumber by motor truck, right in the Willamette Valley, but in general I would say that it was desirable to do the bulk of that by rail transportation, and I don't propose to pose here as an expert on transportation.

I shouldn't think such movement of commodities as I have mentioned would compare, in the volume of units transported with carload shipments of the same commodities by rail.

945 In my judgment one farmer or rancher would not need an artesian well to provide water for livestock and the irrigation of a tract of 80 or 120 or 200 acres. They are now getting along over there with small individual wells.

In my judgment I don't think the exodus of settlers from the Fort Rock Valley that was mentioned by Mr. Spencer in his cross-examination (1735) was contributed by the lack of rail transportation. It was lack of water.

Recross-examination:

There is a good road from Paisley northwest to Bend, and there is a road on the north side of this area from Burns to Bend, but aside from those two there is nothing in there that is comparable to our western Oregon highways. And these are nothing like as good as our western Oregon highways. I think if there were a good highway (1736) from the Fort Rock Valley to the Great Northern Railroad it would help out a whole lot.

Exam. ROGERS. Help out a lot in what?

Mr. SPENCER. In the movement of produce from the Fort Rock Valley, if they could produce. Is there any reason why the produce of that valley, located as it is with respect to the Great Northern Railroad and in respect to Bend, why the people couldn't prosper there if they had water and roads?

A. Well, I might give an example of where they had some transportation down in the case of the Alvord Valley borax deposits, and they had a fair road and they mule-teamed borax out of there down to Winnemucca. They had transportation out, and it was prohibitive. There are cases where proper rail facilities would enable an industry to persist.

946 Q. Well, that is hardly comparable with this, is it?

A. I don't know. It is an example of what lack of transportation meant to an industry.

Q. But you wouldn't speak of settlement in an agricultural area like Fort Rock, if it is to be agricultural, wouldn't speak of that as an industry? It is a development of a community, isn't it? (1737.)

A. Well, that wouldn't be as dependent as an industry moving minerals. Each unit is small in its product, comparatively. It wouldn't be a boxer-car proposition in that region for some time to come. It might be ultimately.

Q. And you know that the great quantity of livestock that comes in from western Oregon into the north Portland yards here comes in to a large extent in trucks, doesn't it?

A. I recall from previous testimony that the movement of a good deal of that stock out of eastern Oregon resulted in a loss due to the fact that a lot of it had to travel on foot a long distance, with the shrinking. I would expect that to be obviated by better transportation. That was a long distance proposition.

Q. But is there any reason why livestock produced in the west end, or in the Christmas Lake Valley, if it could be produced there, couldn't find a delivering station on the Great Northern Railroad, or at any point between that and Bend, at the present time, without any railroad construction?

A. That would be fairly easy, I think. (1738.)

947 Further redirect examination:

As to whether in my opinion the transportation need of an area of 100,000 acres of producing land, say, in the Fort Rock Valley,

can or would be met adequately by motor truck transportation in and out, I would rather not answer these questions on transportation. (1739.)

HAL F. WIGGINS was thereupon produced as a witness on behalf of complainants, and having been duly sworn, testified as follows:

Direct examination

I am a rate and traffic expert. I am employed by the Public Service Commission of Oregon, and I am likewise engaged in independent work. I have been employed in rate and traffic work by the Oregon Public Service Commission between five and six years steadily, and occasionally since, making a total of seven years. Prior to coming with the Oregon Commission I was assistant rate and traffic expert for the Washington Commission for about six or seven years. The work I was engaged in for the two commissions just had to do with rate and transportation matters entirely; that is, the rate departments of the two commissions. (1741.) During that time it was my duty to compile statistical information from various official records.

For something over six year prior to my association with the two commissions I was in the railroad service in the freight traffic department of the Northern Pacific Railway in Seattle, and the Chicago & Eastern Illinois Railway in Illinois. My total years of experience in connection with traffic and transportation matters covers something over 20 years.

I have been engaged in an investigation for the purpose of preparing statistical information and studies in this case.
948 My work in connection with this case has extended almost continuously for several months. In the preceding cross-State railroad case I made a similar study, but not anything like as extensive as in this one. (1742.) I have, as the exhibits indicate, undertaken in the first part to make an accounting for the traffic of western Oregon, particularly the Southern Pacific Company lines in Oregon and short line connections of the Southern Pacific. That first subject I have covered was actual statistics of present movement of Oregon carriers, and particularly over the lines of the Southern Pacific and short line connections. That is one part of the study.

First, as recorded in the first part of the proposed exhibit, I have accounted for the traffic of the Southern Pacific and short line connections, most particularly embracing western Oregon; second, as the second part of the proposed exhibit will indicate, I have shown general and transportation statistics of the Southern Pacific and the Union Pacific lines in Oregon; and, third, compilations allocating traffic and revenues to the proposed cross-State line. I might say that the second part of the study, as proposed in these exhibits, likewise embraces traffic of the Union Pacific lines in Oregon, and, in the main, the studies (1743), unless otherwise indicated, are for the calendar year 1926, the latest available figures that were com-

plete. I have compiled these in three separate exhibits, which I desire to introduce here.

(Said statement so offered and received was thereupon marked "Complainant's Exhibit No. 26, Witness Wiggins.")

(The statement so offered and received was thereupon marked "Complainant's Exhibit No. 27, Witness Wiggins.") (1744.)

949 (The statement so offered and received was thereupon marked "Complainant's Exhibit No. 28, Witness Wiggins.")

I have a copy of that. [Paper passed to Examiner Rogers.] The explanation is not all contained in this. I could not say it is complete. I have briefed it to make it as brief as possible as I explain it. Exhibit 26 is a classified statement of the carload traffic of the Southern Pacific Company lines in Oregon, based upon the carrier's special statement thereof, compiled at commission request, being an actual count for alternate months of 1926 and doubled for the full calendar year. The figures do not include less than carload freight.

In the course of compilation it was found that through using the alternate months of the year 1926 same represented approximately 50 per cent of the Oregon revenues for the year, and it was stipulated as between the carrier and the commission that the multiple two be applied to the results obtained (1745) for the six months enumerated herein to obtain the total figures for the year.

Oregon originations and destinations are by counties and for convenience have designated this traffic by territorial groupings as "local," "intermediate," "transcontinental," "short line connections," passing or "bridge" traffic, etc. As regards the traffic to and from short line carriers tributary to Southern Pacific lines in Oregon, that which undergoes rebilling at the latter's junction point is treated as of Southern Pacific origin, while traffic billed through from short line origin to final destination is stated separately, according to name of such carrier.

950 As the title page of Exhibit 26 indicates, there are series of subdivisions, and for convenience I have designated certain groups or strands of traffic after the terms "transcontinental," "intermediate," and so on, representing in a general way the destination territory to which the western Oregon traffic moved. The term "transcontinental," so-called here, is used in the general acceptation of the term, meaning across country, encountering the Portland, Ogden, or other junctions' gateways. The first page of the exhibit, in addition to being (1746) an index, is also a general description of those terms as I have used them in the compilation. The title "intermediate," by way of explanation, is destination territory that is short of strictly transcontinental, being in the main territory that is adjacent to the Southern Pacific System lines.

Continuing, passing of "bridge" traffic, so-called, is that which neither originates nor terminates in Oregon but moves over the lines of the Southern Pacific Company in Oregon. Local group territory is the general caption under which I have grouped what you might call intra- and inter-county, or intrastate traffic; and, with a few

additions, the last designation, groups any other traffic than already set out.

Now pages 1 to 36, inclusive, show the total carloads and total tons of all commodities, "transcontinental" by commodity groups moving between points on the Southern Pacific Company's lines in Oregon and the various States and countries shown via the Portland, Ogden, and other junctions' gateways; the recap of which, on page 36, accounts for a total of 37,386 carloads or 1,093,458 tons. Of this so-called transcontinental tonnage 8.28 per cent is agriculture; .05 per cent is livestock; 2.18 per cent is mines; 82.26 per cent
951 forest; (1747) 7.23 per cent manufactures and miscellaneous; similar percentages being shown for eastbound as against westbound movement.

As to the relationship in the movement of traffic via the various gateways which I have listed—as shown at the bottom of page 36, bearing in mind that this is a so-called "transcontinental" only, there is for the year 36,434 cars, or 89.43 per cent, moving as eastbound, 1,008,174 tons, or 92.20 per cent of the tonnage eastbound. The first figure is through all gateways eastbound. The percentage of the cars being stated in one instance, and the second percentage being that of the tonnage. The westbound is, for the three gateway designations indicated and accounts for 3,952 cars or 10.57 per cent of the carloads, and 85,284 tons or 7.80 per cent of the tonnage westbound. The totals, both east and westbound, are shown in the lower right-hand portion of the page.

Page 37 shows by counties the total cars and tons to and from Southern Pacific points in Oregon and to and from Oregon points on other roads. The statement is divided into parts (a) and (b) according to direction of movement; part (a) representing (1748) outbound movement by the originating carrier and part (b) representing inbound movement or the reverse movement to that indicated in part (a). As the States and counties involved are lesser distant than the transcontinental I have, for convenience, classified same as intermediate-group territory. As previously mentioned the headings to and from Oregon points on other roads are understood to account for such portions of said connections as is not covered by through billing. Through billed traffic from such short-line connections encountering Portland, Ogden, and other
952 junctions gateways is shown on insert, pages 37–c and 37–d. The total both-way movement for the 12 months accounts for 85,644 carloads or 2,410,508 tons. The traffic to and from Oregon points on other roads (separately stated) amounts to 38,444 cars or 1,193,654 tons. Those figures are given on insert pages you have there, 37–b, c, and d set ahead of page 37.

As a further explanation of this last named traffic, I have inserted supplemental pages 37–a and b, itemizing individual commodities.

Page 38, I have classified or grouped as "local" traffic being the Southern Pacific Company's intra and inter-county local tonnage in

Oregon and totaling for the year 109,766 cars, or 3,959,748 tons. (1749.)

Pages 39, 40, and 41—those are short insert pages, that are under size—represent passing or "bridge" traffic, which neither originates not terminates in Oregon but passes over the Southern Pacific lines within the State and totals for the year 18,276 carloads, which, figured at Oregon annual report averages on traffic other than originated in Oregon, amounts to 342,498 tons. Briefly analyzed 11,208 carloads or 61.33 per cent of the total carloads of this so-called "bridge" traffic moves northbound through Oregon while 7,066 carloads or 38.67 per cent moves southbound through this State. 92.77 per cent or 16,954 carloads of a total of 18,276 carloads of said passing or "bridge" traffic moves between California on the one hand and points in Washington, Idaho, Montana, North and South Dakota, Minnesota, Wisconsin, other Eastern States and Canada on the other, encountering neither Ogden nor El Paso gateways.
953 2.46 per cent moves between New Mexico on the one hand and Washington, Idaho, Montana, and Canada on the other and encounters neither Ogden nor El Paso routing; 4.28 per cent moves between Texas, Louisiana, and other Eastern States on the one hand and Washington, Idaho, and Canada on the other, routed via El Paso, Texas; 0.49 per cent moves between Utah, Wyoming, Colorado, Texas, Louisiana and other Eastern States on the one hand and (1750) Washington State on the other, routed via Ogden, Utah.

The principal commodities moving northbound as against southbound with total cars and total tons of each are shown by the following table, page 41–b.

Pages 42 to 49, inclusive, are condensations in restatement of the so-called "transcontinental" block or traffic classification, showing more readily by commodity grouping, the origination, distribution and gateway routing of 37,386 cars or 1,093,458 tons as treated in pages 1 to 36, inclusive. Average per car loadings are shown in pages 42 to 44 and the percentages of commodities moving eastbound and westbound between Oregon and the various States, territories and countries are reflected on pages 45 and 46 while distribution of all commodities both eastbound and westbound via the Portland, Ogden, and other junctions gateways is indicated on pages 47, 48, and 49.

I can give a summary which will give you an idea of the amount of traffic moving via these different gateways in some relative way. (1751.) That is found on page 49. The recaps that follow along there—you will note the general divisions according to commodity groupings after the Interstate Commerce Commission's classification of commodity statistics, and the recaps are in reality sub-
954 caps for the subdivisions as indicated at the top of the page, but all are drawn in a general recapitulation in the right-hand portion of page 49, the directions being indicated.

Pages 50, 51, and 52 show primarily the distribution of forest products to territory designated "transcontinental" accounting for a total of 27,186 cars or 899,474 tons, averaging 33.09 tons per car.

Pages 53 to 67 show by county origin and destination State the movement of the individual commodities comprising forest products.

Page 68 for reasons indicated segregates forest products from all other commodities, grouping the latter in the lower half of the page. By the same statement totals are shown excluding Klamath County, Oregon, and the right-hand portion of the page shows carloads, tons, and averages per car for each of these commodity groupings for Klamath County only. Briefly, for the year, forest products total 27,186 cars and 10,200 (1752) cars of other commodities, of which 5,292 cars and 418 cars, respectively, were for Klamath.

Owing to weight variations page 69 shows carloads, tons, and averages for logs, ties, and other forest products separately.

The first half of page 70 is an allocation of forest products to Douglas, Jackson, and Josephine Counties, being the three southernmost counties of Oregon immediately west of the Cascade Mountains. A recapitulation of all "transcontinental" by commodity group for east and west movement follows.

Summarizing, from the foregoing figures embracing all traffic reported for the 16 counties, including Klamath, served by the Southern Pacific lines and Oregon points on other lines tributary
955 thereto show: S. P. local—via the gaterways as grouped at the bottom, it might be well to designate via the Ogden gateway 27,218 cars, 318,004 tons; via other junction gateways—and by that it has been explained to mean perhaps chiefly El Paso and more southern routings, that is, the southernmost routings—the entire exhibit is summarized—2,488 cars, 60,258 (1753) tons, or a total of 40,630 cars and 1,192,682 tons. That is the appendix or the folded portion of page 70. No corresponding figures to Item 9, transcontinental outbound, were furnished for inbound traffic, the carrier explanation being that the inbound or received tonnage is negligible. A detailed statement of this traffic is shown on pages 37–c and 37–d.

Pages 1, 2, and 3 of Exhibit 27 embrace a comparative statement of the tonnage of steam roads in Oregon for the five-year period, 1922 to 1926, inclusive, pages 1 and 2 showing commodity detail of the 10 major roads rendering classified commodity statistics, and page 3 summarizing tonnage figures for both large and small roads embracing all carriers reporting to the Public Service Commission of Oregon.

It might be explained here that the United Railways, owing to reclassification, has been included in the so-called "small roads" grouping, although at present rendering its report on steam Form A, large roads.

In Exhibit 28, pages 1 to 3 contain a five-year recap of revenue freight carried by 10 major lines in Oregon rendering on Form A, large steam report, namely, the Great Northern; the Nevada, California & Oregon; the Northern Pacific; the Oregon Short Line; the Oregon Trunk; the Oregon-Washington Railroad & Navigation
956 Company; the Southern Pacific; the (1754) Spokane, Portland & Seattle; the Sumpter Valley, and the Valley & Siletz Railways. Those are all of the large steam railroads serving the State of Oregon, with the exception of the United, as I indicated, rendering on large steam, Form A report.

Page 3 shows the total revenue freight, by commodity groupings, originated in Oregon by all steam carriers of the State rendering the regular annual reports. Pages 4–a to 4–f, inclusive, immediately following, list the 31 carriers embraced in the preceding pages, as well as to show the percentages which each group of traffic bears to the total traffic originated. I think that is self-explanatory. I have used the annual report, commodity classification, the commodity item number as well, for purposes of ready identification.

It is noted that the total tonnage originated within the State on the lines of the 31 steam carriers named herein, increased yearly from 9,171,984 tons in 1922 to 14,238,078 tons in 1926; an increase of 5,066,094 tons, or 35.58 per cent. The total tonnage computed on a five-year basis is 7.87 per cent agriculture; 1.41 per cent livestock; 4.09 per cent mines; 78.05 per cent forests; 6.29 per cent manufactures and miscellaneous; 2.28 per cent less-than-carload merchandise.

Page 4 shows Oregon-Washington Railroad & Navigation (1755) Company revenue freight in Oregon for 1926, setting out in detail the branch line traffic, forwarded and received according to system classification as local, intrasystem and interline. The right-hand portion of the pages shows the approximate percentages of tonnage forwarded and received at the principal stations on the branches named as secured through the auditing department of the company, while the left-hand portion of the pages shows the total freight
957 carried in Oregon as contained in the annual report of the carrier to the public service commission. In relation to the latter this branch line tonnage represents 27.87 per cent of the carloads and 28.9 per cent of traffic originating in Oregon.

Page 5 is a comparative statement of the carloads of commercial freight received from connections by the Oregon-Washington Railroad & Navigation Company and the Oregon Short Line Railroad Company, with summaries by divisions.

When I say 27.87 per cent of the carloads and 28.9 per cent of the traffic, the word "traffic" has reference to tonnage; and that, as explained in the lower right hand corner of page 4, is bearing in mind the possible differences in compilation of the branch line statements and the annual report figures which are submitted in accordance with the Interstate Commerce Commission's classification of commodity statistics. (1756.)

The remainder of the exhibit consists of traffic and operating statistics as abstracted from annual reports of the individual carriers named for the years 1922 to 1926, inclusive. I think the headings in all cases are self-explanatory and the references and authorities therefor are shown in the exhibit. It might be well to explain that the average operating ratio of expenses to revenues is repeated in the freight and passenger statistics.

Exhibit 28, of 16 pages, shows estimated tonnage and revenues on Oregon traffic via proposed cross-State line for the first, second, third, fourth and fifth years following construction. The tonnages conform to the Teutsch report at the then current rates as secured through the commission's rate department, figured on mileages
958 via the proposed cross-State line junctions. The method of allocation to the proposed cross-State sector is that of straight mileage pro-rate based upon percentage relationships of such mileage to the total mileage hauled. By way of recheck, the percentage of total ton-miles of the former to the latter was calculated. To illustrate: Column 1, page 1, first entry, shows the mileage Eugene to Chicago via Crescent Lake; column 2, showing point of origin; column 3, assumed destinaion; column 4, the commodity; column 5, number of carloads; column 6, total number of tons; column 7, the rate per hundred or per car as indicated; column 8, the rate per ton of 2,000 pounds; column 9 (1757), total revenue obtained by applying the rate per ton to the total tons shown while the rate per ton mile as stated in column 9 is the rate per ton divided by the miles hauled.

Columns 11 to 17 represent the remainder of the calculation, including allocation, showing the distance hauled over the proposed cross-State line between points shown in columns 12 and 13; column 14, showing the total ton-miles over such cross-State sector and column 16, stating the percentage relationship of cross-State haul to total estimate haul. Column 16, by way of allocation of revenue to the cross-State line represents this percentage of total revenue or the straight mileage pro-rate of column 11 to column 17. As indicated, column 17 is the average rate in cents per ton-mile over the cross-State sector as obtained by dividing revenue footings in column 16 by total ton-mile footings in column 14.

The term "general average rate per ton-mile" appearing after certain totals throughout the exhibit represents a similar calculation to the one last described based upon all of the commodities comprising one general commodity group, as for example,
959 "Fresh fruits," being occasioned by the variations in the rates therefor.

Pages 1, 2, and 3 embrace eastbound traffic for the first year while pages 5 and 6 similarly figured represent westbound for the corresponding period. A recapitulation appears at the bottom of page 6 following a calculation of first year estimates (1758) figured on the alternative of deducting traffic for Klamath, Jackson, and Josephine Counties from the tonnages shown on pages 1, 2, and 3 on the

theory of immediate construction of the proposed Alturas line. The formulæ are the same throughout the exhibit and the recaps reflect the results of the two bases.

Pages 7 to 16, inclusive, represent in abbreviated form similar calculations for the third, fourth, and fifth years, the second year being the mean of the first and third years.

The details of calculation supporting the rate per ton mile in column 7, pages 7 to 16 are readily traceable in pages embracing the first year traffic. The asterisk indicates where averages have been arbitrarily applied as in the case of Fort Rock.

Inasmuch as there are no published rates from certain of the points or junctions indicated on the cross-State line intermediate application of existing rates as from Eugene or Ontario, for example, have been applied in some instances. In other cases intrastate distance scales for the mileages affected, according to the single or joint line hauls involved, have been applied. References and authorities are shown in the exhibit and by the detail afforded in first year pages are readily checked.

Page 9 shows alternate calculations for the third year traffic due to the proposed construction—Klamath to Alturas.
960 General recaps for the five years at alternate bases follow (1759) at pages 15 and 16.

By separate exhibit of three pages tonnage and revenue calculations, after the method used in the Oregon traffic, are shown for movement from the " ten southwestern Idaho counties " via the cross-State line. The columns, while necessarily abbreviated in typing, were computed in all the detail of first year Oregon calculations and represent all the factors essential to a recheck if desired.

I believe the Idaho figures are in every instance attached to that last Exhibit 3, but I have to state that there are a few revisions which are in the course of properation, and if the exhibit is attached to those exhibits I intended to detach it, but if it is attached to the third exhibit, or Exhibit 28, I wish to withdraw it at the present time until the revisions now in the course of preparation are made. I intend to represent that in a separate exhibit. I wish to present that by way of supplemental exhibit.

The territorial designation, " 10 Southwestern (1760) counties," has been supported by Idaho witnesses, and I understand represents the counties of Ada, Adams, Boise, Canyon, Elmore, Gem, Owyhee, Payette, Valley and Washington. They are not included in Exhibit 28 at the present but will be included. I have included nothing for the southwestern Idaho tonnage at this time. I might explain that that exhibit was attached to the copy that I had. I expect in my supplemental exhibit to have drawn together the total tonnage from Oregon, Idaho, and all States that are involved. There are certain witnesses yet to appear, whose tonnage statistics will figure in that, and I wish to dress it all down in one general summary and summarize it into one brief statement.

961 When I spoke of revisions it had nothing to do with this. It could be stricken from the record, so far as the explanation of the revision. It in nowise pertains to the Exhibits 26, 27, or 28. (1761.) It refers to something to be done. I endeavored to explain, thinking that the exhibit had not been detached from 28. (1762.)

[File endorsement omitted.]

962 PORTLAND, OREGON, *August 13, 1928.*

HAL F. WIGGINS, resumed the witness stand and further testified as follows:

Cross-examination:

The first 36 pages of my Exhibit 26 are analyses of the traffic originating on and destined to points on the Southern Pacific lines in Oregon—traffic transcontinental in character, encountering the gateways indicated. The first 36 pages did not include traffic local to the line. Nor do these pages include traffic originating on the Southern Pacific lines in Oregon and destined to so-called inter-mountain country except as the States grouped in the upper portion of the title page would indicate. It is not the intermediate group so-called. (1763.) Although intermediate group territory shown on the title page is Arizona, California, Canada, Winnipeg and west; Mexico, Nevada, New Mexico, Oregon points on other roads, and Washington, that is not discussed or included in the first 36 pages. Those pages pertain to traffic from so-called transcontinental group territory to Southern Pacific points in Oregon, and from Southern Pacific points in Oregon to the group destinations stated. This so-called transcontinental group traffic includes all points embraced in the 16 counties which the Southern Pacific serves, including Multnomah and Tillamook Counties. (1764.) Tillamook is west of Portland, but for northbound stuff it would come through Portland. There would be no occasion for eastbound stuff coming into Portland. It would come to a junction south of Portland. I believe Willsburg is a junction, or it could come out other ways, but it would come either 12 or 15 miles south of Portland, I would say. Willsburg is 8 or 10
963 miles—I am not certain—from the main yards and shops of the Southern Pacific lines in Portland. It is some such distance as that. However, as I stated, there are other ways out and it would probably go from Beaverton south to Cook and out that way. There are two or three entrances in there; or, it could be routed down the west side, leaving the Tillamook line at Hillsboro. (1765.) I don't know fully the prevailing practices as to routing and handling there. I assume carrier convenience might enter into it to a certain extent. I should say that carrier convenience is reflected by the current operation. It is my understanding that it is through the Willsburg junction, particularly for northbound. That is the junction, I should say, going into Portland.

Q. Now do you have in mind this tonnage thus analyzed, speaking now of the tonnage to and from transcontinental group territory

to the territory served by the Southern Pacific lines in Oregon; do you have in mind the consideration of all that traffic as available for the cross-State line?

A. No; I would not say all, yet it is the so-called transcontinental strand or group which it was the purpose to lift up from the entire traffic so that the commission could see the volume of that tonnage.

Q. Yes; I am not undertaking to criticize the exhibit; I just want to know the fact as to whether in the exhibit and your estimates you have included all this traffic, so-called western (1766) Oregon traffic.

A. Well, the exhibit in its entirety embraces all of the traffic, and that is the one particular transcontinental strand or segregation of that traffic.

Q. And to that traffic you applied the existing rates?

A. No, no; I have applied no rates to that traffic.

Q. Well, how do you get your estimate of earnings there?

964 A. Well, I think, if you will recall the Newell report you will recall his own explanation of the manner in which he has handled such traffic as he has drawn from western Oregon, called "diverted traffic." I have not attempted to rate that traffic in the exhibit there, but I have rated traffic which we style "created traffic," as the exhibit indicates.

Q. Well, how did Mr. Newell get his estimates? I understood him to say that he obtained them from you.

A. He used the count of the traffic as embraced in the exhibit as a basis for the cars which he used.

Q. Yes; but he made an estimate of earnings on the traffic through to destination and from originating points east to western Oregon points, and I understood him to say that he obtained the rate data which he applied from you.

A. Well, that pertains to created traffic, Mr. Spencer, and he has his own formula for any costs or other charges applied to this so-called transcontinental traffic from western Oregon. His report, I think, cares for that entirely. (1767.)

Q. I a mnot asking you about the charges or the expenses incurred in the movement of the traffic, but he does incorporate all of this traffic in his estimate of earnings; that is, all the traffic which he assigns to the cross-State line, he applies the earnings on that traffic all the way through to its destination, in both directions. Now, did you furnish him those figures?

Exam. ROGERS. I think Mr. Newell in his exhibit computed the savings on that certain traffic and not the earnings.

The WITNESS. He has his own formula for the computations surrounding that traffic. I did not give him any revenues on that traffic. I gave him the cars and tons as embraced in the report. The same cars and tons are used as a basis in Exhibit 26.

965 Exhibit 28 carries estimated earnings allocated to cross-State line, traffic created; traffic that we consider would be created as a result of the proposed construction. (1768.) That created traffic is east and west traffic, to and from both directions

across the State line. I go as far east as the southwestern Idaho section for originating created traffic, as indicated in the exhibit. (1769.)

The purpose of analyzing this traffic originating in western Oregon and destined to transcontinental territory, and from transcontinental territory to western Oregon, was to lift up to commission vision the volume of the transcontinental traffic from and to western Oregon. I just wanted to show the present volume of the traffic as is. As to whether I am suggesting by that that it is available for the cross-State line, or would so move, I consider that very largely it is traffic which might properly avail itself of the shortest possible route to destination.

Q. And does your analysis show what part of the traffic would be, in your opinion, available for the cross-State line?

A. Well, I believe that all cars that have been shown here, I think, are reached by the cross-State line the shortest distance.

Q. What page indicates the traffic originating in western Oregon destined to transcontinental territory, or originating in transcontinental territory to points in western Oregon, that would, in your opinion, move by the cross-State line?

A. Well, it isn't exactly segregated in that way. Here is the thought in connection with that, to answer your question: So (1770) far as Oregon is concerned, taking the Ogden gateway east, the point of division, or equi-distant point, for example, going via the cross-State as against Roseville, is well south of the Oregon-California line. I think it is down on the Southern Pacific
966 there about Lamoine, or some point considerably south of the Oregon-California line, therefore, all of Oregon going eastbound in the direction of Granger, for instance, is reached shortest via the proposed cross-State line. That is, as between the cross-State line and as between the Roseville-Ogden line.

Q. But where is that point when you take into consideration the existing railroad of the Oregon-Washington Railroad & Navigation Company and the Oregon Short Line Railroad Company?

A. Well, you come up north of Salem, Oregon—I think it is up north of Fairgrounds, I believe, is the equi-distant point around through Portland and Huntington east as against via Eugene and the proposed cross-State line.

Comr. McMANAMY. That wasn't the question, was it? As I understood, the question was, where was the point as between the Oregon-Washington Railroad & Navigation Company and Roseville?

Mr. SPENCER. Yes, sir; Mr. Commissioner. (1771.)

A. The Oregon-Washington Railroad & Navigation Company and Roseville?

Q. Yes; for the moment, put out of consideration the proposed cross-State line and deal with the existing routes—the Southern Pacific route via Roseville and Ogden on the south and the so-called Union Pacific system route, the Oregon-Washington Railroad &

Navigation Company, on the north, to the east, and tell me where your dividing point would be.

A. Well, I thought I had that here available. I don't seem to—I believe that is—the equi-distant point, I think, is about 260 miles south of Portland.

Q. Around Grant's Pass?

A. No, sir; that would be near a place called Chinchalo, I believe it is. It is in the neighborhood of Leland, I think. That is a little better known. However, the exhibit, so far as that is
967 concerned, or the grouping of the traffic, was with a view to the shortened distance via the proposed cross-State line?

Exam. ROGERS. How far down would 260 miles take you, Mr. Wiggins?

A. It is 198 miles to Roseburg. Leland is intermediate Roseburg to Grant's Pass. Roseburg shows on most of the maps. (1772.)

Q. Take you down to about Glendale somewhere, wouldn't it?

A. Well, every map seems to differ a little bit in the naming of those stations, but——

Q. Well, you know the distance from Portland to Roseville, do you not?

A. Yes, sir.

Q. It would be half that distance, wouldn't it?

A. No, sir; I don't think it is quite that. I don't think it is that much.

Q. Well, what is the equi-distant point between Roseville and Portland on the Southern Pacific?

A. Well, it is half of 642 miles. I can——

Q. That is 320 miles?

A. 320 miles, and 320 miles down the line would take you to——

Q. Medford, wouldn't it?

A. Tolo. That is——

Q. Well, Tolo, is just a few miles above Medford?

A. Yes; it is about ten—yes; some ten miles north of Medford. Medford is down near the California line, and that is half way between Portland and Roseville. (1773.) I know how far it is from Portland to Granger on the Union Pacific system lines—it is about 932 miles. From Roseville to Granger, I think it is 822 miles. In my consideration and analysis of this traffic and its possible routing, I have considered the Oregon-Washington Railroad & Navigation Company route from the standpoint of distance,
968 just the same as the southbound routing. We have computed the cross-State distance against both the northbound and the southbound. As between the cross-State route from western Oregon and the existing route of the O.-W. R. & N., I figured that the equi-distant point would be something north of Salem—that is where the mileage would break. Fairgrounds is a few miles north of Salem, 5 or 6 miles, as I recall. (1774.)

Q. And the route through Portland from all Willamette Valley territory, north through Portland from all points of origin now in

the Willamette Valley, is much more favorable from an operating standpoint to Portland than it would be up to Crescent, isn't that true?

A. Well, I could hardly undertake to say as to that. I consider the——

Q. Well, how many years have you been acting in traffic matters in this territory, Mr. Wiggins?

A. Over 15.

Q. Yes, sir; the rates on the Southern Pacific lines in the Willamette Valley are influenced and limited by water competition, both actual in the past and potential now, isn't that true, on the Willamette River?

A. At various times in the past there has been some boat operations on the Willamette, yes.

Q. And you know that it is a moderate water level grade——

A. Yes.

Q. From Eugene to Portland?

A. Yes; the Willamette Valley is——

Q. And you know that you are climbing on a 1.7 grade from Eugene to the summit of the Cascade Mountains to reach Crescent Lake?

Mr. DEY. 1.8. (1775.)

969 Mr. SPENCER. 1.8 grade?

A. About that.

Q. Yes; and you say that you hesitate to express an opinion whether it is advantageous from an operating standpoint to operate from Eugene down to Portland on that water level grade, on an old seasoned main line track, as compared with the movement from Eugene up over the Cascades to Crescent Lake?

A. No; I don't, but you are not taking into consideration the Blue Mountain section of the Oregon-Washington Railroad & Navigation Company operation.

Q. I am just asking you about the route from Eugene to Portland?

A. As against Eugene to——

Q. Crescent Lake; yes, sir.

A. To Crescent Lake. Well, the former is a water grade; the other one is up grade about what you stated.

Q. Now, the climb—it is about 350 elevation at Eugene, is it not?

A. I think something like that.

Q. Above sea level?

A. I think something like that.

Q. And it is some 4,800 or 4,900 feet elevation at the summit of the Cascades on this existing Southern Pacific line to (1776) Crescent Lake?

A. I don't recall exactly, but something like that.

The Southern Pacific folder shows the elevation at Crescent Lake to be 4,779. Cascade Summit is stated as 4,840. The elevation on the Blue Mountains, to which I referred, at Kamela, I think, is something over 4,000. (1777.)

As to where the heavy volume of traffic originates in western Oregon on the Southern Pacific lines, I think that the Willamette Valley might be considered the hub of the traffic. The heavy
970 producing counties, simply from an agricultural standpoint, are Lane, Linn, Marion, Polk, Benton, Yamhill, and Washington—they are among the heaviest. Those are Willamette Valley counties principally; and the heaviest tonnage originating in lumber.

Q. And, as manufactured to-day, the lumber from western Oregon originates largely in Lane, Coos, Columbia, and Tillamook, does it not, and Clatsop?

A. Douglas—I have those arranged in order, I think, here. (1778.)

Q. I am not asking you about the stands, but the lumber really is manufactured and mills operated and the tonnage afforded originates in those counties?

A. Yes; Lane, I should say, is representative; the Coos country feeding in through that way. (1779.)

On page 37–a of Exhibit 26, I list traffic which originates on some of the small railroads in western Oregon, certain short-line connections, and which is delivered to the S. P. lines in Oregon. I gave a list of all of them; they are listed alphabetically on page 37–c. I would not say they are all the roads originating traffic in western Oregon other than the Southern Pacific lines, the Oregon Electric, and the S. P. & S. They are the principal ones. There are perhaps some additional lines, but those are the short-line connections, as listed by the Southern Pacific, delivering traffic to it.

Q. Now, there is not any interchange for eastbound business between the S. P. & S. or the Oregon Electric to either the Southern Pacific or the Union Pacific, is there?

A. Well, there is a general—I don't know just what the——

Q. I mean through rates. There is an interchange, of course (1780), but I mean, do you know whether there are any through joint rates from points on the Oregon Electric Railway in western Oregon, or on the S. P. & S. lines in western Oregon and
971 the Southern Pacific or the O.-W. R. & N. for eastern destinations?

A. The lumber rates in the main from western Oregon apply by either the north gateway or the south gateway. As to your physical connections, I am not just positive about those.

Q. I am not asking about physical connections, but I am asking about the joint rates and whether any arrangement obtains now whereby this business originating on the S. P. & S. or the Oregon Electric in western Oregon can go via the Southern Pacific east or via the O.-W. R. & N. east.

A. I have just forgotten the tariff provisions in regard to that. Generally speaking, we can route either way.

A large number of the cars on page 37–b of this exhibit undoubtedly is local to the lines here in Oregon. The division, however, is later segregated according to the gateways, as the Ogden gateway,

which they encounter. Pages 37–c and 37–d set out what I am mentioning; 37–d, for example, indicating the routing eastbound.

Q. Well, that routing as reflected by page 37–c is all routes, is it not—routes Portland gateway?

A. Well, if it fell short—if traffic went out and fell short (1781) of the Ogden gateway, it would not be shown there, see!

Q. On page 37–c?

A. No, sir.

Q. But this includes, 37–c, Ogden and other junctions gateways, does it not?

A. Well, yes; used in the transcontinental sense.

Q. Yes; now by that statement of the Exhibit, 37–c, there originated eastbound on these various small carrier's short lines, as I understand this statement, at Portland, there originated a total of how many cars via all gateways—3,244 cars?

972 A. A total of 3,244 cars, or 99,224 tons, encountering the Portland, Ogden, and other junctions gateways. That is so-called transcontinental purely. All the other would fall short of these gateways.

Of that 3,244, there would be moving via all gateways east through Portland—that would include the Northern Pacific, the Great Northern, the S. P. & S., and the O.-W. R. & N.—722 cars. That is the total for 12 months via the Portland gateway. (1782.) And via the Ogden gateway from this carload business moving eastbound originating on these short lines, 2,430 cars, and via other junctions, 92 cars. Other junctions, besides Portland and Ogden, for that business could be El Paso or California junctions. Bearing in mind that is must be understood in connection with this exhibit, page 37–c, that this is so-called thorugh billed traffic. It is not all of the traffic that the Southern Pacific receives from these designated short-line connections, for the reason that if there are no through billing arrangements, as in the case, probably, of a great number of them, the Southern Pacific has reported it as originating on the Southern Pacific and it would, therefore, be embraced in pages 1 to 36, inclusive. But this is so-called through billed, being some instances of through billing arrangements with such short-line connections. (1783.)

Page 37–d shows at a glance the distribution by State or county, of the traffic which is eastbound traffic that is contained on page 37–c. It is that portion of through transcontinental traffic from these short-line connections that go via these gateways designated. And so far as I know, that through Portland goes via all routes.

To explain again, this page 37, to begin with, it represents a general territorial designation which, with the exception of the northern territory, is directly contiguous to Southern Pacific

973 lines or Southern Pacific system lines, and in addition to the traffic from these counties indicated at the head of the page in Oregon to these States and countries designated is shown the

(1784) traffic from Oregon points on other roads; in other words from these short-line connections, that being traffic presumably which the Southern Pacific Company took into account at the junction point and probably went forward on S. P. billing; in other words, traffic which, so far as we were enabled to learn, did not carry through billing.

Q. Well, there is not anything in this traffic you have analyzed and presented on page 37 that affects the cross-State line, is there?

A. Well, there is none I believe that encounters the Ogden gateway—the Portland or Ogden gateways—as I understand this. I think that in most instances there—in California, for example—there would be no occasion to go through the Ogden gateway. Nevada, Arizona, might go through southern California connections; New Mexico likewise; Washington——

As to whether Nevada traffic westbound would go through the Ogden gateway, it might or might not. I don't think that it would necessarily. It was styled as that segregated from the Ogden gateway routing. (1785.)

Comr. McMANAMY. Before we get away from this exhibit, page 37–c, I notice you have under the heading "Westbound" the statement "None reported." Does that mean that for lack of records or other reasons you gave no consideration to traffic which originated in the East for points in central Oregon?

A. On this westbound accompanying traffic there, manifestly there is some. We accepted, however, the Southern Pacific's explanation, and the fact that they recorded it negligible. Under the cir-
974 cumstances, we have not endeavored to secure detailed figures on that. Certainly on these short-line connections where the mills are in operation there would be some commodities.

Comr. McMANAMY. I don't refer to that; I refer to the through traffic that moves to all western points in considerable volume, such as, for instance, farm machinery, logging machinery, mill machinery, furniture, and commodities of that kind, which do move westbound in considerable volume and which of course move to all important points in the West.

A. That is exactly, your honor, what I had in mind in my answer, traffic of that character. But, as the exhibit indicates, this block, if I may classify it so, of transcontinental traffic in connection with these short-line connections was not originally secured or reported. It is supplemental, and the detail involved was considered disproportionate to the volume of westbound that would go in there. Under the circumstances (1786) we accepted the carrier's explanation of it.

Comr. McMANAMY. I was trying to get away from short-line connections and take the main-line movement. The Union Pacific originates and handles for at least a portion of its line a large share of the traffic that comes to all parts of Oregon?

A. Yes, sir; it is reported; the both-way movement is reported in the first part of the exhibit, pages 1 to 36. In the main, as regards the Southern Pacific proper, but not to these tributary or short-line

railroads, due to the explanation offered. The westbound transcontinental traffic movement and the transcontinental strand, which we hope to hold up to the view of the commission, is shown in the exhibit.

Q. (By Mr. SPENCER.) Now right in that connection, your explanation as to the lack of traffic westbound for these des-
975 tinations on the short-line railroads, isn't it true that the (1787) commodities that move in would, as a rule, move in less than carload?

A. Well, in some instances. In other instances I would not say so. Take the matter of mills and their supplies and machinery, and so forth, that would not necessarily; it would probably be carload. There would be a mixture. As to whether it would be any substantial volume, I haven't the figures in connection with the short line connections, as the report indicates, but I am positive there would be some. That westbound traffic would move to the end of the joint rate, wherever the joint rate carried it. It would be billed that far.

Q. And ordinarily as to miscellaneous freight of this kind moving transcontinental, the destination would be Portland or some of these points on the Southern Pacific, would it not?

A. It might be anywhere in the western Oregon territory, Willamette Valley, Eugene.

Q. It would not be, unless these small roads had joined in the tariff and had become parties to the joint rates, would it?

A. Oh, it would be billed through to the termination, as far as the joint arrangement carried it. It might be rebilled. (1788.)

Q. If it is rebilled it is reflected in your statements 37–a and b; is that right?

A. 37–a and b plus the through billed, 37–c and d, would account for all of it.

Comr. MCMANAMY. Now will you clear up one point for me. You say that it would be billed through to the junction point with the short lines. Have you in mind the approximate number of
976 short lines out here that have combination rates, that do not have through rates to destinations? What do you mean by the short line which would not handle it under the through billing?

A. Well, there would be roads, Mr. Commissioner, which are not a party, perhaps, to transcontinental tariffs, some little sprinkling; but I think in most instances that there are either through rates or arbitraries over certain Willamette Valley points which would carry this traffic to destination. To illustrate my point, I have in mind roads which would not. I have in mind what I would call a sprinkling of short line logging roads, particularly, in some instances perhaps not measuring up to so-called standard operation, which might not be parties but which the tributary to junction points in western Oregon, that perhaps mark the terminus of transcontinental through rates, or might even be intermediate thereto but who have not come into full tariff recognition. (1789.) In those instances they would undoubtedly move up to or out on local roads.

Comr. McMANAMY. That would be roads which are not common carriers?

A. I don't believe even that all common carrier roads are parties. I have not checked for all of those, but as this exhibit indicates here there are other roads than those named here, some in fact that are not listed at all, which are in a sense feeders, undoubtedly move up to the point at which they connect with transcontinental carriers. It would move beyond under additional charges locally. It would be in excess of the through rate.

Comr. McMANAMY. Yes; but the through rate up to what point? It would not be paid out of the through rate, in other words?

977 A. Charges would simply be, of course, additional to the through, which would maybe land in close proximity, if it happened to be on a line that was in full standing or recognized as a party to the tariff. (1790.)

The through lines, the transcontinental lines have performed their full service and they are turning the shipment over to some line or company which does not participate in the through rate. That would be the practice. I might say by explanation, it has been my observation in the northwest here that there is more or less leniency toward this scattering of small lines that come into existence as lumber feeders of sawmills tapping new lumber and the exaction of standards by way of operation have not been very great. There comes a time in their evolution when they seem to logically become a party of controlling tariffs, but sometimes there is a long period of years when they go along and in some instances reporting to neither interstate nor State commissions.

Comr. McMANAMY. How can there be leniency in this respect? They are either interstate carriers or they are not; they are either common carriers or they are not. They either participate in the through rate or they do not.

A. That is true as to the tariff. There is pretty much a distinct line there that can't be crossed; certainly as to the filing of concurrences which serve to draw the line pretty closely there. But my point is that oftentimes in the past rather than work undue hardship on those roads that are boosting and helping these (1791) mills, and are in a way incidental to the milling operations, they have not been pressed on standards of operation and that sort of thing to

978 rush them into the common-carrier class as quickly as possible.

Comr. McMANAMY. But all that we are dealing with, so far as I understand it, is the rate. Now, if the transcontinental carrier moves this carload traffic to the junction point with the logging road, that is not even a common carrier, consigned to a mill up on that logging road, which perhaps is the owner of the logging road, so far as the transcontinental movement is concerned the shipment has reached its destination at that junction point, hasn't it?

A. Yes, sir; I believe that is true. And I think it is true that what is done with it beyond that does not affect it in any way—the transcontinental rate or the provisions of it. As I understand it,

you understand, of course, there are some instances in which there are arbitraries over the so-called transcontinental lumber rate from western Oregon. I have in mind, if I am not mistaken, the instance in which there was a cent and a half per hundred on the Valley and Siletz Road over and above the through transcontinental rate. As to whether that was absorbed by the through carrier, (1792) I don't know as to the disposition, but that was an instance, and I believe that it reached the attention of the Interstate Commerce Commission.

Comr. McManamy. I was thinking more particularly of westbound traffic which is in carload lots, where it moves and is distributed over these small lines, and I was trying to get an understanding of just how that fact would affect the rate or its divisions.

A. Perhaps an example like corn from Nebraska, that might move westbound and filter into western Oregon, of which there is a substantial quantity at the present time; there it would come as
979 far as the transcontinental rate would carry it, say Eugene, or some point like that; intermediate it might encounter a short-logging railroad that had been in existence for a number of years. There might be some dairying, and agricultural, and general pursuits slowly set up along there——

Comr. McManamy. Without wanting to interrupt, would that be intermediate or would it be beyond Eugene after the shipment had reached Eugene?

A. Well, it would in a sense, of course, calling for further transportation, be beyond, the example is typical throughout western Oregon; the logging road might be anywhere tributary to the branch, I would not say that of the immediate basin of the valley, but outlying lines of the Southern Pacific system. (1793.)

The situation with respect to the short line railroads is that in the main they *ogirinate* lumber traffic. That traffic in the main is eastbound. With respect to that eastbound lumber traffic, as they became parties to the tariff they have for a number of years uniformly enjoyed the group rate that obtains in the lumber producing areas west of the Cascades. I mentioned an exception, as I recall, in the case of the Valley and Siletz. There I think is an example in which there was an arbitrary, as I stated, over the so-called transcontinental lumber rate.

Q. Well, I am wondering whether there is any exception to it since the decisions of the commission here in numerous cases known as the Tap Line cases?

A. I don't know how many there are. I haven't checked those up. As to whether there is any arbitrary for lumber originating on the Valley and Siletz over the coast group rate, it may have been corrected. I am not certain as to that. (1794.) Generally
980 speaking that is the situation.

Q. Now of course they are parties to this transcontinental tariff covering the transportation of this lumber if they enjoy through group rate?

A. They would be parties to the tariff. They get their division on that commodity, whatever it may be, out of the through rate.

Q. Now they are small institutions, without extensive organization or accounting facilities; that is true, isn't it?

A. Well, a good many of them render annual reports, so far as that is concerned. Some designate auditors, some not. But manifestly it is not elaborate, and, for that matter, they usually render on a simplified or abbreviated annual report form. In fact, that is the very explanation of why the detail is not greater in this classification. The annual report does not carry the detailed statistics for the smaller lines that they carry for the large steam roads. (1795.)

I think it is true with respect to that traffic westbound, and practically all traffic that they handle, except the lumber, which is in volume, it moves for all intents and purposes to the Southern Pacific junction point as the origin point or the Southern Pacific junction point as the destination point, as far as the rate of a transcontinental haul is concerned. I think in the absence of a filed tariff that the rate over that covers the local haul out on this short line railroad.

The summary on page 36 includes only carload freight. Eastbound and westbound, through the gateways that are designated. There are 37,386 cars involved, 1,093,458 tons. I gave Mr. Newell that tonnage and those cars for him computations, plus the
981 similar traffic which is designated farther on. (1796.) Mr. Newell has a copy of it all.

I give no consideration whatsoever to less than carload traffic, neither eastbound nor westbound. I so stated at the outset.

Of the total tonnage on page 36, 82¼ per cent is forest products, lumber. As to the routes that take it to the destinations I specified in detail on pages preceding page 36, beyond the gateways indicated, I don't have the routing. The rates apply in the main through the Portland gateway and via Ogden. Either way. The rates, as a rule, apply, en route from western Oregon, either north or south bound. (1797.) Without the tariff I can't undertake to enumerate what lines other than the Union Pacific system lines that lumber can move east over originating on the Southern Pacific in western Oregon. As to whether it can move east over any other route through the Portland gateway, I wouldn't say, no. There is a division to the territory. I can't undertake to enumerate the routings, however, offhand.

Exam. ROGERS. I want to know whether different routing beyond Ogden is permitted if the shipment went by Roseville as distinguished from going via Portland?

A. Well, there would be some territory south, perhaps, to which the Southern Pacific would, you might say, control the routing, or would be typical Southern (sic) routing. I haven't concerned myself in this column with the routing beyond the gateways in common. (1798.)

Q. (By Mr. SPENCER.) Well, but you are an experienced rate expert, Mr. Wiggins; and lumber, of course, has been the subject of rate discussions in this territory in hearings for many years. Now, as I understand the inquiry of the examiner, it is whether or not a shipment of lumber moving eastbound through Ogden has any greater delivering trade territory over any greater number of other lines than a shipment moving to the same destinations through Portland. Is that the question?

982

Exam. ROGERS. Well, take two shipments, both going east through Ogden, but one moving south over the Southern Pacific to Roseville, and the other moving north through Portland down to Granger, over the Oregon-Washington Railroad & Navigation Company. Now, whether one shipment, because it went Southern Pacific, Roseville, to Granger, would be different routing permitted beyond than the shipment moving O. W. R. & N. and Portland?

A. I think most of this, this block, might be either. I think that the intermediate block that I have shown here would be that that (1799) would of necessity cling to the southern routing.

Q. But is it your opinion that the routing is the same east of Granger, no matter which way the shipment goes; is that your answer?

A. Well, there is a great diversity of routes. Certainly there are thousands of designated routes in connection with the originating carriers. Now, as to this, it simply embraces more voluminous tariffs and detailed study on the east end than I have undertaken and given in this.

Taking a shipment of lumber from Booth-Kelly's mill at Springfield, near Eugene. It is, as I understand it, the rates apply, joint through rates, to transcontinental territory and the east via Ogden; that is, Roseville to Ogden, on the one hand, and via Portland, say, and the Oregon-Washington Railroad & (1800) Navigation Company and those connections on the other. The same destination territory is embraced in both tariff routings. The shipper, the Booth-Kelly people, I understand, could route that shipment through Portland to any line, or to any destination, east of Granger, irrespective of whether it moved through Roseville and Ogden or whether it moved through Portland.

983

If it is limited to the inter-mountain country there might be some territory intermediate, as I stated, that would be peculiarly or particularly Southern Pacific routing.

Exam. ROGERS. By "inter-mountain territory" you refer to west of what point in that question?

Mr. SPENCER. Well, west of Denver. West of the Rocky Mountains, generally speaking, and east of the Cascades.

A. Well, there would be intermediate territory there that would be logically southern or logically northern via the existing lines, the rates themselves largely dictating to that extent. (1801.)

Take a car of lumber loaded by the Booth-Kelly Lumber Company at Springfield, consigned to Kansas City; the Southern Pacific hauls that to Ogden, which is the end of its line, at that point it is free to either turn it over to the Union Pacific for movement to Kansas City or to the Denver & Rio Grande Western and Missouri Pacific for movement to Kansas City, as I recall.

Comr. McMANAMY. And the Southern Pacific can do that, can turn it over to the Rio Grande Western, without short hauling itself, and the possibility is there that it may do so; but the Union Pacific once it gets that lumber, having its own line to Kansas City, wouldn't give it to anyone?

A. That would be a matter of course. I understand that situation exists with respect to traffic which moves through the Ogden gateway.

984 Comr. McMANAMY. Now, when we get to Granger we have a different situation, because there isn't anybody there to give it to but the Union Pacific—there is no other line. (1802.)

A. That is true, of course, except that the Short Line reaches the Ogden and Salt Lake gateway by its own line. On the example cited, that is my understanding of it. I wasn't making a point of the rates in this study, and for that reason I didn't go into that and make a check of that.

Q. (By Mr. SPENCER.) On that same shipment of lumber going to Kansas City, originating at Springfield from the Booth-Kelly mill, it could move via either the Northern Pacific or Great Northern through Portland to Billings, Montana, could it not, and thence via the Burlington to Kansas City?

A. Well, I am not certain as to that routing.

Q. Did you use this data, pages 1 to 36, in Exhibit 26, as the basis for any computations or estimates farther on in any of your studies that you have introduced, either Exhibit 27 or 28?

A. No, sir; Exhibits 27 and 28 are wholly separate, except as the annual report figures of one or the other of the carriers would naturally embrace total tonnage, but they are not in anywise (1803) related.

On page 37 I have a total in carloads for the 12 months of 48,580 cars. That total is stated exclusive of the Ogden and Portland gateways.

That 48,580 cars, however, *os* one part, Part A—Part B—There would be 37,064 cars under Part A—which would make a total of 85,644. That is greater in volume than the total east and westbound transcontinental business.

Q. Practically double. Well, what relation does that have,
985 if any, to the cross-State line?

A. Well, merely to try to make up, so far as possible, a complete consist of the traffic in western Oregon.

I haven't used it as the basis of any estimates or computations further on in Exhibit 26 or in Exhibit 27 or 28. On the other hand, I have excluded it. (1804.)

I think there are 19 counties in western Oregon. And 16 served by the Southern Pacific. I do not believe Curry County is served by a railroad. I think there would be Clatsop and Columbia Counties not served by the Southern Pacific.

Page 38 of the exhibit reflects the business in western Oregon counties served by the Southern Pacific, that is local to its lines. That includes Klamath County local traffic, also. That would be intra- and inter-county. That would be local to its line. (1805.) It would not include connections it has in that same territory with the short line railroad I refer to. I understand that this is strictly Southern Pacific.

Q. I see. You say, then, if there was something from the connecting line it was taken in by Southern Pacific billing, the Southern Pacific has accounted for it as such.

A. Klamath is included in this. Seventh column. I don't understand that there is any duplication in any of the classes of traffic we have considered to this point.

I classify as bridge traffic, traffic either originating or terminating in Oregon but passing over lines of the Southern Pacific Company in Oregon. That is on pages 39, 40, and 41. That traffic would not be related to the proposed cross-State line except as it might offer desirable routing, shorter routing.

Exam. ROGERS. Why wouldn't that be related to the cross-State line, the same as any other traffic?

986 A. Well, Mr. Rogers, I perhaps should have said that it stands (1806) in exactly the same position as any of these other units. The thought of it is, I was trying to hold up to view these segregated strands embracing the whole, and in that sense the relationship is the same.

Page 39 states it is northbound and southbound commodities. As to how that could be related to the cross-State line, as I stated, it might be desirable to route something over the cross-State line as against the present routing; it would afford a shorter distance to some of the territory designated.

Q. Well, it has been delivered to the Southern Pacific from an originating point indicated in the first column on the table, hasn't it?

A. Delivered or received. Originating at the point in those designated territories, or received at a point in those designated territories, passing through Ogden.

Q. Now, if it originates in Washington and is delivered to the Southern Pacific southbound it wouldn't and couldn't move via the cross-State line, could it?

A. Between Washington and California it would probably move as is shown here.

Q. And if it was received by the Southern Pacific from a point in Idaho to a point in California as it at present (1807) moves it couldn't go any other way than via the Oregon-Washington Railroad & Navigation Company and the Southern Pacific, could it?

A. Well, manifestly the rates apply that way now, but it might be entirely logical to move it across State. That is, the southern Idaho territory at an advantage, or take territories like Minnesota, Wisconsin, other eastern territory, it might move
987–988 through the cross-State at an average. If that traffic originated on a northern line, the Northern Pacific or Great Northern, or Milwaukee, the tendency would be that they would hold it for their own haul and deliver it to the Southern Pacific at Portland.

Q. Now, the carload traffic, the large carload traffic, other than livestock or products of agriculture, originating in Idaho would be in the Camas Prairie country around Lewiston or up in the mining district in the north end of the State, isn't that right?

A. That would be lumber and ore area.

Q. Yes; and that traffic couldn't move via the cross-State line, could it, if you were to use the Southern Pacific as a bridge?

A. Well, some of it might take central Oregon routings. I wouldn't say that it would come onto the cross-State at the (1808) Ontario entrance.

Q. Well, where would it enter? Have you got another entrance than the Ontario entrance?

A. Some of it, I think, might—I have considered for certain areas up north of—in northeastern Oregon, might come that way. Some of it might come onto the Oregon-Washington Railroad & Navigation Company lines in central Oregon at Sherman and go south, which would be merely skirting portions of the cross-State. Some of it inbound to the interior would be logical for routing the cross-State, but those lines not being in existence and there being no rates it would remain to be seen what would be established there.

989 The cross-State line, as petitioned for in this case, is located approximately 5 miles sout0h of Bend. The Oregon-Washington Railroad & Navigation Company operation terminates at Bend from Sherman on the Columbia River.

Q. Well, then, how could any O.-W. R. & N. traffic be delivered to the Southern Pacific through that gateway as a bridge to southern destinations?

A. Well, it may not necessarily route O.-W. R. & N.

Q. Well, you mentioned O.-W. R. & N. (1808.)

A. I mentioned it, but unless they participated in joint rates meeting the rates of the other carriers.

Q. Now, if it originated on the Northern lines and came up the Deschutes Canyon, to California, where would they deliver it to the Southern Pacific?

A. That could be exchanged at the southern terminus of the Northern lines. In the case of the Great Northern that terminus would be Klamath Falls. However, there are connections at Bend.

Q. Well, there isn't any connection at Bend with the Southern Pacific, is there?

A. Well, the line parallels all the way from the river throughout the north and south limits or area of Oregon.

Q. Now, are pages 40 and 41 a detail of page 39?

A. They set up the both-way movement. The movement is consolidated in 39 and it is given in each direction in 40 and 41. Those totals, 39, 40 and 41, are by carloads and not by tons.

Q. Now, by page 42 you return to your transcontinental (1810) movement and analysis, and present it, as I understand it, by
990 commodities and by counties in Western Oregon?

A. That is summarized according to commodity groupings, in which, of course, we lose the destination territory aggregation as carried in the early part of the exhibit. That includes traffic in both directions.

On page 45 is a further development where I use the same commodity grouping and determine the State or territory to or from which the products move. This summary at the bottom there corresponds with the summary at the bottom of page 36 of the exhibit. Page 46 summarizes or consolidates groups 1 to 5. In other words, all other traffic embraced in 45. If you will take together pages 47, 48, and 49, you have the statement of the same transcontinental strand of traffic, but showing more graphically and feathered to a little greater refinement through the gateway designations. That indicates, I maintain, at a glance the origin and destination (1811) territory by commodity groups via the particular gateways. It is summarized in the right hand portion on page 49.

I did make an analysis of page 37, that bridge traffic—I mean by commodities. Page 37 carries commodity consist in the preceding insert pages there. Only as to the Short Line, however, the other figures not being further dealt with in the exhibit.

Q. There is such a large volume of it there, seemingly about 75,000 cars or more. There is a consist on page 37–A for the Short Line——

A. Well, that is true. There is no further segregation of 37. That is virtually deposited in a block.

Page 47 is a consolidation of the commodities and the territory from and to which they move, and (1812) that comprises all
991 commodities in the so-called transcontinental group, by groups.

You will note commodity group 1 to 16, inclusive, for instance, embraces, generally speaking, the products of agriculture. Those are listed and are drawn into a recap, at the foot. Then the right half of the page is given to commodities groups 17 to 28, inclusive, animals and products, and are likewise summarized at the bottom of the page, and so on through the five general groups. This is limited in its scope to the tonnage that is analyzed in the first 36 pages. That is also true with respect to pages 48 and 49. Forest products are segregated from other traffic and treated separately on page 50. Page 50 designates the counties in which these forest products originate, and pages 51 and 52 the destinations to which the same moves—they are accompanying statements, the one being a condensed statement of the origination, and the other contains a state-

ment of distribution or destination. That is speaking, of course, in a sense of eastbound (1813) as controlling. The both-way movement is shown, but I mean the origination and distribution feature of the exhibit as dealing with the Oregon traffic originated for eastbound movement. Page 52 accompanies page 51 as the remaining portion of the distribution. The two pages are occasioned by the listing of the destination territory, as you will note.

Returning a moment to page 50, which was eastbound, 150 carloads of lumber from Multnomah County via Ogden, that is listed for the county as a whole, further detailed designation not being shown. (1814.) The major portion of the mills in Multnomah County are in Portland. I don't know if all Multnomah County mills are in Portland.

992 Q. Well, if those Portland mills ship via Ogden, through Roseville, to the extent reflected on this page 50, Multnomah County mills, how can you expect mills located local on the Southern Pacific, having a much shorter haul to Ogden, to route their lumber via a cross-State line, turning it over to another carrier?

A. Well, they would have open to them a shorter route if they inclined toward the south.

Q. You have got a much shorter route open from Portland, her mills right there at Portland?

A. This is for Multnomah County, as a whole.

Q. Well, Multnomah County.

A. I would not say it was entirely confined to Portland.

Q. All right, Multnomah County. What is the difference in distance to Granger via the O.-W. R. & N. and the Oregon Short Line from Portland as compared with the distance from Portland via Roseville and Ogden to Granger, Wyoming?

A. I can give you that. Well, I make the distance from Portland to Granger via Roseville as 1,464 miles, and from Portland to Granger via O.-W. R. & N., Huntington, Oregon Short Line (1815), as 932 miles. That is a difference of 532 miles, if I figure it correctly.

Q. All right. Now this lumber moves, according to the statement on page 50, from the mills there in Multnomah County eastbound, 6 cars via Portland and 150 cars via Ogden, and the difference in mileage to Granger is five hundred thirty some odd miles. Now they both have the same rating privilege, but the mills are on the Southern Pacific, are they not, as a rule?

A. Yes; this traffic is from points originating on the Southern Pacific lines.

993 Q. Yes; these mills are on the Southern there in Portland, but rates obtain from Portland to these destinations, the same basis of rates, via the O.-W. R. & N. and the Short Line as via the Southern Pacific and its connections at Ogden, but 150 cars of it from Multnomah County moved through Roseville and Ogden as against 6 cars via the O.-W. R. & N. and its connections. Do you know whether the 6 cars moved via the O.-W. R. & N. or the Northern lines?

A. No; I can't tell you.

Q. They might have all moved to destinations on the Northern lines?

A. I can't say.

Q. But the fact is that practically all the lumber manufactured in Multnomah County originating on the Southern Pacific lines moves now, 530 miles farther to Ogden, in preference to taking (1816) the much shorter route of the O.-W. R. & N.?

A. Well, these cars of course embrace forest products as a whole. That is understood; not necessarily lumber alone. The compensations, and the traffic solicitation, whatever goes with holding business to its line, I presume, is reflected in it. I would not undertake to say.

Q. Now with that precedent confronting you, how will this traffic in western Oregon, 82.25 of it being lumber, how do you expect that the mills will route that via the cross-State line when they disregard a difference in distance here of over 500 miles?

A. Well, I think you have to take into consideration all that goes with the origination and holding of traffic, to answer that; all of the compensations that go with the traffic. That is difficult to answer.

Q. Well, there will be the same compensations that go with
994 the traffic after the cross-State line is built that obtain now; isn't that true?

A. I think if you are to give heed to economies and desirability of shorter routes, less expense, shorter time, direct cut to markets that are competitive, I think all of those things would argue in favor of the cross-State routing.

They did not argue as effectively (1817) for the use of the existing railroads as they would by the cross-State line. I think that you are overlooking a world that goes, as I say, with the first grab at the traffic. As to whether the same advantage of the first grab at the traffic will obtain in the cross-State case as obtains now at Portland, as to that originated by the Southern Pacific, it will be expected to exert every influence at the first direction of the traffic. I should say that is pretty effective. That is the difficulty. I could not say what part of the traffic is routed by the shippers. All of those compensations enter into this thing and they are undoubtedly numerous.

Q. (By Mr. SPENCER.) Well, you would not expect any of those 150 cars to go via the cross-State line, would you?

A. I surely would.

Q. From Multnomah County?

A. I certainly would, if they originate on Southern Pacific line, as they do here. Why wouldn't they all go?

Q. Well, if you are going to be governed by economies, the saving would be accomplished by moving them on the present line (1818) of the O.-W. R. & N., isn't that true?

A. No. You would be offering me there a dual line haul, or a two-line origination, you might say, as against a single. This originates on the Southern Pacific. There would be the matter of
995 terminals and the passing of the traffic through the Portland terminals to reach the O.-W. R. & N. Company. That may or may not be a switching operation. There may be a line haul plus the switching operation. As to whether there are much more advantageous conditions at Portland for interchange of traffic, than there will be up at Crescent Lake—it is ordinarily put up to us in the other light, and that is that the expensive Portland terminals ought to be avoided in the interchange of this traffic—keep all traffic out of the congested areas. As to whether the shipper or the consignee concerns himself with that feature, he might.

Q. How are you avoiding the expense of the Portland terminals by diverting the traffic to the Crescent Junction rather than at the Portland Junction?

A. Invariably when depression has existed in the country, I am positive that the analysis has been that of diverting the traffic around the congested centers, diverting it via gateways that are not so congested, to avoid any terminals. (1819.)

Q. There is not any congestion at Portland terminals, and has not been any, has there, for years?

A. Well, they are the expensive terminals involved, as explained to us. It is true, up to a reasonable point of saturation, that the more business they had to handle the less the cost per unit. As to whether I think any saturation point has been reached with any of the carriers in Oregon in the handling of traffic, I would say, yes. Since you mention it, I could not say definitely about that, but we have been of the opinion that the O.-W. R. & N. Company might represent some such congestion. As to whether the O.-W. R. & N. is to-day not handling to exceed between a third and a fourth of the traffic that it has handled as a maximum, I haven't checked
996 the figures recently on that, but I would not think that it would be so small as that. However, it would surely be desirable to route via the cross-State as against the Portland terminals and over the Blue Mountains.

Q. You know, from the financial statements of the O.-W. R. & N. and from knowledge obtained for fifteen or twenty years, don't (1820) you——

A. I know what the annual reports reflect with the State commission; yes.

Q. That it is operating at a heavy deficiency most of the time?

A. Well, that was not true in 1926.

Q. No.

A. I haven't checked the 1927 figures.

Exam. ROGERS. What is the difference in the distance to Granger by the proposed line and by the O.-W.?

A. The point equidistant, as I believe, I stated before, is a few miles north of Salem, in other words, intermediate Salem to Portland, as to whether you go cross-State or go Huntington.

It is 51 or 52 miles from Salem to Portland. As to whether it is 105 miles longer to Granger from Portland via the proposed cross-State line than it is via the O.-W. R. & N., I don't understand that it is that difference. I understand that the point equidistant is, as I stated, north of Salem, to Ontario, which would be the point that you would meet the (1821) O.-W. R. & N., or the O. S. L. main-line traffic. From Portland to Eugene it is 123.7 miles. From Eugene to Crescent, 95.5 miles. From Crescent to Crane, 185—185 or 9. From Crane to Ontario, 127. That would be from Portland 412 miles as against 535 or 536. The total, then, from Portland to
997 Ontario, via the present line, is 432 miles as against 536 miles via the proposed cross-State line; that is a difference of 104 miles in favor of Portland—I believe that is correct. As to whether on a haul of that length, I think that there would be any inducement for the shipper or consignee to move that via the cross-State line instead of via the present route of the O.-W. R. & N., I think it would. I would still feel that the way under the circumstances, (1822) might be much clearer for the traffic. As to why the shipper or consignee would route that via the cross-State line instead of the O.-W. R. & N. and its connections, I think that he would avoid, as I say, the unknown quantity of terminal handlings at Portland; he would avoid what he might or might not feel would be congestion or difficulties in the Blue Mountains of the O.-W. R. & N.; he would probably reason that time would be a factor in his favor; and there might be other compensations. I can't say where he would get any quicker time than he would have via the present O.-W. R. & N. line; the cross-State line not being in operation. I say what I believe he would find.

Now going down here to Tillamook County, there are big milling operations; there are large milling operations on the Tillamook branch of the Southern Pacific, and it produces eastbound, by this page 50, 241 cars (1823) that move via Ogden eastbound and only 95 cars through the Portland gateway. I do not know, without going back to the detail statements as to destination how many of those 95 cars move into Minnesota, the Dakotas, Montana, or destinations on the northern lines. The detail will show that; that detail is in my exhibit; showing the destination States. As to whether I think that would be routed the same way that the Portland traffic would
998 be routed, I would think, in the main, that substantial similar compensations would accrue to that through the cross-State.

Washington County joins Multomah and produces a lot of lumber. As to whether the lines serving Washington County come right in there to Multnomah County, they skirt it. (1824.) But they would go out the same way, via the same junction as the Tilla-

mook traffic; they could go the same. I have 543 cars from Washington County that are routed via Ogden and 228 cars via Portland. As to whether all of this traffic from Washington County could move a very much shorter distance if it went through Portland, it would be shorter certainly than the Roseville routing. In fact, I think the Roseville routing is a wholly abnormal routing for it. It would be something shorter than the cross-State line, but with the same objections as stated to routing it that way—the terminal situations at Portland and other difficulties.

Q. What are the other difficulties? You have got a more serious mountain to climb east of Eugene than you have over in the Blue Mountains by the O.-W. R. & N., haven't you?

A. No; I don't understand, in a way that that new Natron cut-off has been held up to us in the compensations that it would be so. I think it would be a desirable route for that direct east and west line. (1825.)

Exam. ROGERS. Mr. Wiggins, in this Portland traffic originating on the Southern Pacific is there a switching charge by the Southern Pacific or the O.-W.?

A. There would be switching, which I understand—well, it might or might not be absorbed. There would be switching service.

999 Exam ROGERS. Do you know whether that switching charge is absorbed by the O.-W.?

A. It would be—I understand that that would be absorbed—well, I can't say offhand as to the tariff. I haven't checked it up recently.

Mr. DEY. Why, don't you know, Mr. Wiggins, having been in this traffic game as long as you have been in it in this territory, that the coast group rates apply, no matter what gateway you use?

A. I do, Mr. Dey, but——

Mr. DEY. And there is no switching charge? Isn't that a fact, and don't you know it is a fact?

A. To this extent: Wherever the traffic is competitive in character. In Oregon we expect to see the switching charge, but that might not necessarily hold true as to all of this, and where it might not be so the general rule is, as everybody knows, it is common knowledge, to not absorb it. Wherever it is truly competitive and open to equal solicitation we expect it, and that is the prevailing rule. (1826.)

Mr. DEY. We are talking about transcontinental traffic.

Mr. SPENCER. Colorado and east.

Mr. DEY. Colorado and east; and isn't it true that the rate applies, the same rate applies, on a car of lumber originating in Washington County or Tillamook County or Multnomah County, going through either the Portland gateway or the Roseville gateway, and the shipper pays exactly the same money, doesn't he?

Exam ROGERS. What does the Southern Pacific get for its switching from the originating point to the O.-W.?

Mr. DEY. They get a division of the rate.

1000 Mr. SPENCER. That is right, isn't it?

A. Why, that is right as to your statement with respect to the through transcontinental rate.

Mr. DEY. Well, that is what we are talking about, is transcontinental traffic; that is the traffic that you expect to support your cross-State line, isn't it?

A. That is a part. That is one block of it; yes, sir.

Mr. DEY. Yes.

A. But you are lumping in one sum a similar situation of all mills, which I maintain may not be true.

Q. (By Mr. SPENCER.) Well, your analysis here on page 50 obtains to transcontinental traffic?

A. This is the transcontinental strand.

Q. Transcontinental lumber? (1827.)

A. Yes, sir.

Q. And transcontinental lumber enjoys the same rate from all points of origin from the western Pacific coast group, doesn't it, to transcontinental destination?

A. Generally speaking, I should say that it is the same.

Q. There is no exception, is there?

A. Yes; there would be—there might be exceptions to it.

Q. Is there any on the Southern Pacific Oregon lines? You are analyzing Southern Pacific traffic here originating on the Southern Pacific rails, and is there any exception?

A. Well, I don't recall, offhand. I have not checked that. But I would not necessarily expect but what those very obstacles might exercise some influence in this heavy routing that way.

The rate to Chicago from this Pacific coast group on lumber is 72¢, I believe. It applies from Pacific coast points, generally speaking, Pacific coast common points to Chicago. Traffic 1001 originating on the Southern Pacific can be routed either north or south, as I have stated, via the Union Pacific or Southern Pacific, and probably the Northern (1828) would come in wherever they—I don't recall the tariff, would not want to quote it offhand; it is too voluminous.

Exam. ROGERS. Mr. Wiggins, is the answer to this question in your exhibit anywhere: As to how many carloads of traffic destined to points, we will say, between Klamath Falls and Salem, were turned over to the Southern Pacific at Ogden by the Union Pacific during any given year?

A. That is shown by county boundaries. In other words, we have in the exhibit, and it can be computed from the county segregations for pretty nearly any territorial designation that you may wish.

Exam. ROGERS. Is that substantial, or does it amount to anything, or is it negligible in carloads, or do you recall?

Mr. DEY. Where do you refer to the exhibit to find it?

A. Well, I would turn back to the exhibit which reflects all commodities for that. My thought is that the lumber exhibit itself

would not be typical, for the reason that there would not be (1829) heavy lumber movements westbound of course. I have set out on pages 45, 46, and 47—for example, on page 46 I have summarized the total cars east and west—let me see, though. I think we go back just a little bit further. Page 44 is a brief summarization, which will show the westbound to the particular counties via the Ogden gateway. In that instance there are 1,226 carloads of freight coming to the sixteen counties served by the Southern Pacific via the Ogden gateway, westbound movement. That is in the fifth double column to the right, 1,226 carloads westbound received by the Southern Pacific at Ogden.

1002 Q. (By Mr. SPENCER.) And delivered to western Oregon counties?

A. And delivered to the sixteen counties designated in the left-hand margin of the page—

Exam. ROGERS. Does that include territory north of this equi-distant point, Salem, you might say?

A. It would, and certain counties would have to be eliminated. But, as I say, by county designation, territorial designation, is the smallest unit that I can give that.

The two counties there receiving the largest number of cars west are, first; Multnomah County, 168 cars. As to whether they would move via the cross-State line (1830), I think it would. As to whether I think that it would go into Multnomah County coming westbound, to industries located on Southern Pacific tracks, I think it would; I think it would be logical for movement via the most direct route there. I would not consider the present O.-W. R. & N. line to be the most direct route for the reasons or objections that I have mentioned.

Q. Well, it has got to be delivered to the terminal, hasn't it, whether it comes via the cross-State line or via the Columbia River route?

A. No, not necessarily. This is to Multnomah County as a whole.

Q. Well, what advantage is there in Portland of making delivery of that car from the fact that it comes via the cross-State route instead of the Columbia River route?

A. Well, assuming that your car reaches its destination on Southern Pacific tracks in Multnomah County, I don't understand why it is not logical and wholly reasonable that it should come through what I would consider the clearest route for it to move.

1003 Exam. ROGERS. Do you think the terminal saving would be sufficient to overbalance the extra 104 miles?

A. I would, your honor, coupled with the advantages of empty (1831) car movement in the reverse direction, and that sort of thing. I think those compensations would be considerable. I could not say exactly, but I would consider them substantial.

Q. (By Mr. SPENCER.) You would not haul those empties over a longer line, would you?

A. I would think that the cross-State would be ideal for that empty movement to western Oregon as a whole.

Q. You think if the Union Pacific wants to get some empties into Portland, Oregon, by the O.-W. R. & N., or the Oregon Short Line, that it would have the Southern Pacific haul them in part of the distance and pay wheelage on them, do you?

A. I think that there would be compensations; in fact, I think that those compensations have probably been pointed out by a previous witness, Mr. Newell, that would warrant the movement that way.

Now, the next important destination county in that column is Klamath, that is 129 cars. It should be understood in these numbers that we are using, however, that both the 168 and the 129 should be doubled. You see they are doubled in the totals only. (1832.) Therefore these quantities as set out individually are all to be doubled. But the relationship is the same. 129 cars for six months there, and you double it for the year; and you double the 169. Surely at present I should consider it logical to move that traffic via the cross-State line. What I mean by that is, surely the Roseville routing would have no claim to it as against the
1004 proposed cross-State routing. If the proposed Alturas line were constructed that would give whatever of claim might be to that routing. As to whether the Alturas line would pretty effectively take it away from the cross-State line, well, I am not prepared to say what the difference would be there.

Returning again to this page 50, where 150 lumber cars moving from Multnomah County via Ogden are referred to (1833), that should be doubled. Practically in every instance throughout the report that is true, when you are dealing with other figures than totals. Tillamook 473, of course, should be the same way.

On page 51 is a large volume of business moving to Minnesota via the Portland gateway. My analysis here is dealing with the same cars we have been talking about as handled through the Portland gateway, that is, the forest products portion. As to whether I think the O.-W. R. & N. handles any of that business to Minnesota destinations, I don't know the routing of that. I do know that the Northern Pacific and the Great Northern have through rates, and they serve this territory; and they are the delivering line to Minnesota. The O.-W. R. & N. and Union Pacific have no connection up in there—I would think this would be largely Northern line connection traffic.

Q. So that there are 1,438 cars right in that one item that there is not any prospect of going either via the Columbia (1834) River route or the cross-State line; isn't that right?

A. Well, I don't know what the determining factors in the routing of that were.

Then there is North and South Dakota; they are also served by the Northern lines.

1005 Q. That is shown on page 52. On page 53 do you have local business in this analysis as well as through business?

Take logs, for instance; you have got logs from Douglas County; do they move logs eastbound to Colorado?

A. I have noticed that occasionally there might be a slip of a column there in the classification, but the thought of segregating the lumber products was the controlling one in compiling this and it can be verified by other sections of the report. I believe the item you mentioned as a matter of fact is ties.

I did not intend to put any local traffic in here at all on page 53, 54, or 55; in fact this segregation carries on to and including page 67. It was not the intention to put any local in that and I don't believe it is. I believe, as I say, any apparent discrepancy of that kind is probably due to a shifting of the commodity column (1835), commodity entry, on the left. As is apparent it was extremely difficult to follow those four lines all the way across the page. I was discussing this and I mentioned page 67 as the last page on that particular analysis; there is no summary of that. It is really of minor importance, I take it. I merely compiled it for convenience and, as I say, it is covered by a preceding check.

Now on page 68 I have made a summary of forest products moving east and westbound to and from all counties served by the Southern Pacific, 16 counties in western Oregon, and then a separate statement of Klamath County. I segregated Klamath County owing to the pine lumber. But Klamath County is embraced in the first computation there, 13,593 cars, but excluded in the second and set out separately in the third.

1006 Q. What is the third column on the tabulation of all other commodities which you have, number of carloads, number of tons, (1836) and average tons per car, making a total of all other commodities of 10,200 cars; then you analyze that as to—what is the second analysis, 9,782 cars? Would that be in all the counties except Klamath?

A. The heading at the top governs. 418 cars, Klamath, would be other commodities than forest products from Klamath County. As to what figures I gave Mr. Newell for this page 68, well, I have given him as a matter of fact a copy of the exhibit; I have given him all. But I think, if you care to go forward to page 7, that the individual classes or classifications, or strands of traffic are summarized a little bit more fully.

Exam. ROGERS. Mr. Wiggins, do you know whether Mr. Newell's savings were computed on this traffic from the sixteen counties? What I am getting at is, do Mr. Newell's figures include certain traffic from Multnomah County?

A. I can't speak for his report off hand. I think that it is explanatory as to that. I understand that it embraces substantially the Southern Pacific counties that are named. (1837.)

Now there is a large log movement on the Southern Pacific. As to whether it constitutes a volume in numbers, probably thirty-five to forty per cent of the loaded cars annually, I don't recall off hand what that is. I think there are milling-in-transit rates on that. I

could not say that there are low rates on the logs into milling points; I would not want to pass upon the reasonableness of those rates.

Q. Now as a traffic expert you have got a mill that is not a tidewater mill; you make rates on logs within reason comparatively low, if you can get a good output from the mill of lumber
1007 to haul a long distance transcontinentally, wouldn't you?

A. Well, I could not not answer as to the policy of the road on that. I could not say.

Q. Well, the shipper would attempt to obtain as low a rate as he could, wouldn't he, on his logs in? (1838.)

A. Oh, I would think so.

Exam. ROGERS. They usually do, don't they, Mr. Spencer?

Mr. SPENCER. That has been our observation.

Mr. DEY. On the logs in and the lumber out.

On Exhibit 27 I have the revenue freight carried to Oregon by the large steam roads. That is taken from the annual reports. Those cover the years '22 to '26 inclusive. The significance is, I wanted to give a five-year comparative statement of those tonnages and, as I have already pointed out, indicate the increase over the period. The roads involved are set forth on page 4–a of Exhibit 27. That page lists large and small roads. The 10 roads embraced in the so-called large road statistics are listed on page 4–b. (1839.) Pages 4–a to 4–f, inclusive, are more or less explanatory as to the consist in the recap. In other words, it identifies the commodities, revenue freight originated on the roads named within the State of Oregon and, as is shown on page 4–b, in commodities No. 1 to 16, for example, show that total for the year 1926. Now without encumbering the exhibit for the detail of the remaining features, it likewise lists comparative figures for the years '22, '23, '24, and '25; and it also reflects the percentage that the different traffic groups bear to the total traffic indicated in the right hand column, commodity classifications being used. It goes further, however, on page 4–d, and in addition to indicating the traffic originated by these ten roads in the State of Oregon, it shows all other revenue freight carried
1008 and brings down the total carload and less than carload traffic carried for the same years. It indicates the carriers that carried them collectively only. I may say, however, that the detail of the O.-W. R. & N. lines and the Southern Pacific is shown further on in the exhibit. Page 4 of Exhibit 27 is an analysis of the tonnage (1840) handled by the O.-W. R. & N. System in Oregon, the branch lines, however, being Oregon branch lines, but the figures show at the bottom, for example, the total originated on the O.-W. R. & N., Portland, and likewise the total of all revenue carried within the State.

Starting with the Deschutes branch, column 1, the year 1926, 5,615 cars were forwarded from that branch. According to the statement as shown under the caption intra-system, 488 of those cars reached the Union Pacific Company's rails; the Short Line 210;

the Los Angeles & Salt Lake 53. The others are included in the block of local, 816. Then inter-line eastbound would be 3,511; westbound 537. That 5,615 includes westbound as well as eastbound traffic, also local traffic. (1841.) I understand that, in fact, it includes all the traffic on the Deschutes branch for the year 1926.

Q. And that is true with respect to these other branches you have enumerated, of course?

A. The same compilations, I understand.

Exam. ROGERS. Is there any explanation as to what territory constitutes these various branches?

A. No territory is designated in connection with the branches set forward as itemized there; just the fact that they are Oregon branches.

Exam. ROGERS. There is no showing where they run, from where to where?

A. I haven't designated here the main line junction point and the termini of the branches.

1009 I say there that 5,615 cars were all the cars handled on that Deschutes branch. As to whether those are all the cars forwarded, certainly the portion—the report is divided there in the recap.; it is in three parts, as you notice: Forwarded i none instance. second group is received, and the recap. down (1842) midway of the page there, combines the two.

Q. Of the 5,615 cars forwarded 3,511 cars were forwarded eastbound? No, that is not right.

A. No; that would be the inter-line block only.

Q. Yes, but you say westbound. How could anything move westbound inter-line from the Des Chutes Railroad? Well, it could to the Southern Pacific or the Portland connections; that is what you mean?

A. Yes, sir.

Concerning the letter quoted on page 5–a from the Western Pine Manufacturers' Association, I am not positive who signed that letter or that there was any signature on it, but then I know the statistician of the Western Pine Association who compiled it and wrote the letter, and the man with whom I dealt in securing the figures. (1843.) This is my language down to West Pine Manufacturers' Association, where I say that "Eastern Oregon traffic or traffic generally designated as east of the Cascades and contiguous to proposed cross-State line, is recorded in different sections of this report and accompanying exhibit," but it is in reality an ex'erpt from the report covering western pine tonnage. (1844.)

Q. Well, you make an analysis of lumber from the Bend mills, is that it?

A. Well, further on, in pages 5–C—on page 5–C you will note a partial year check which I took from the records of the mills

1010 located at Bend. That was taken just after the securing of the report from the past in page 5–A.

Q. Now, these shipments on page 5–C, they are all the shipments from the Shevlin-Hixon and Brooks-Stanlon Mills in Bend, I assume, and the destinations of those shipments; is that right?

A. They are what I would call the transcontinental shipments.

Q. Well, you have a got a lot of Oregon shipments and Washington shipments, too, haven't you?

A. Well, I don't know of any locally outside of that. So far as I know, they are the records month by month to the States indicated. I took them first hand, from the statements of the company.

Q. You got them from the Western Pine Manufacturers' Association, didn't you?

A. No, sir; I took them from the records in the office of the Shevlin-Hixon Company at Bend, in the one instance, and in the offices of the Brooks-Stanlon, in the other, but the 35–A is secured through the association, and likewise 5–B.

Q. I notice on 5–A here a letter which you quote, with 10,962 cars. You got those from the Pine Association, didn't you? (1845.)

A. Yes, sir. I simply wanted to supplement that statement with the then most recent figures available up to the date that I took them, which is indicated at the head of the page. I gave Mr. Newell these figures.

As to whether this traffic is a partial traffic, I would contemplate as a resource of the cross-State line, I don't know just fully how he has treated in his report, but I think whatever portion he has used is indicated.

1011 Q. Indicated in his report; but what you had in mind in repairing it was giving it to Mr. Newell?

A. I wanted to show primarily the cars through the Huntington, Oregon gateway, namely, the 3,410 cars shown on page 5–A.

Q. 3,410 cars, and shipments through the Northern gateway, 7,032 cars. Now, what is your idea of showing those cars through the Huntington gateway? What relation does that have to the cross-State line?

A. Well, I have made no further disposition or treatment of these figures.

Q. Do you consider it traffic for the cross-State line?

A. Oh, there might be some of those cars that would be logical for cross-State line movement. In fact, I think there would be. (1846.)

Exam. ROGERS. Did you send these various data over to Mr. Newell and let him figure out what he thought should be considered, or did you determine that in the first place, as to what cars he should take, or shouldn't take?

A. Oh; no, sir; I gave these figures to Mr. Newell in the minutest detail, discussing them with him in every instance, so as to enable him to determine what cars he used, what the traffic was, its origin and destination.

Exam. ROGERS. Well, do you know whether in Mr. Newell's computed saving that he has computed—or, rather, computed savings on Multnomah County shipments, originating?

A. I think the report will show to the extent that that has entered into his calculations.

Exam. ROGERS. Do you know whether he did or not?

A. I believe that he used those.

1012 Comr. MCMANAMY. You are not certain as to what Mr. Newell did?

A. I intended to add, your honor, that I would like to leave to Mr. Newell his own explanation as to the blocks that he has taken, and his reasons therefor.

Mr. SPENCER. Well, Mr. Newell stated, as I recall, that you furnished him the traffic and he applied the rates which you furnished him. Now, you say you discussed it with him in the minutest detail. What purpose did you have in this discussion?

A. To the extent of fully explaining the figures, where they (1847) were secured from and how they were handled, what classification and segregation was made of them, and so forth.

Q. Well, as a traffic man, you were his traffic man, were you not, in the preparation of his exhibit?

A. Well, to correct your statement at the outset, Mr. Spencer, I applied the rates to that block of traffic which is embraced in Exhibit 28. I think that is what Mr. Newell had reference to by way of my giving the rates or the revenues itself to what is embraced in Exhibit 28.

Q. Well, why was it necessary or appropriate for you—what reason did you have for discussing in detail with Mr. Newell this tonnage originating on the Southern Pacific enrouted via the Northern lines to Minnesota, South Dakota, Montana, and various eastern destinations, traffic originating from western Oregon counties closer to Portland than to Crescent Lake? What was the purpose of presenting and discussing that with him?

A. The same as here, to hold up to the view of the commis-
1013 sion these different strands of traffic, so that all might see, it being, so far as I know, the first and only comprehensive count via the gateways involved.

Q. Well, didn't he ask you, and didn't you tell him, in your opinion, what portions of this traffic should be assigned to the cross-State line as a resource for the support of the cross-State line? (1848.)

A. Why, we discussed—that received general discussion and consideration by all concerned, by the commission right along, debated everything in behalf of and against it that we thought worthy of consideration.

Q. Well, have you got any statement here showing what all this traffic you said there should be, or determined should be reckoned with as a resource for the cross-State line?

A. Well, I think Mr. Newell's report is entirely explanatory of the cars that he has taken from here and readily identified the traffic that he—tonnage he has used.

Q. I know, but I am asking you whether you made any analysis of the traffic for the cross-State line.

A. Generally speaking, the block that was of especial consideration is the block I have designated as transcontinental group traffic—transcontinental group territory, embraced in the first thirty-six pages of the exhibit, and summarized at the bottom of page 36, namely, 37,386 cars, 1,093,458 tons. Now, there is additional traffic even, as the short line connections' traffic, which I have set out in detail. That is summarized on page 70, and identified by territorial grouping and classification.

Q. Page 70 to Exhibit 26?

1014 A. Yes, sir. The lower right hand statement to the exhibit, setting out, insofar as possible, the accounting for the traffic as a whole. (1849.)

1015 Q. Did you furnish this information—also furnish this information to Mr. Teutsch and discuss with him the traffic that was available for the cross-State line?

A. No; I didn't give this to Mr. Teutsch, that is, these exhibits. I did give Mr. Teutsch a statement which summarized, I believe, the total traffic of the Southern Pacific for the 16 counties. It was a very, very brief——

Exam. ROGERS. What I was getting at, Mr. Wiggins, when we come to cross-examine Mr. Newell as to why he took certain of this traffic, do you suppose Mr. Newell is going to say that he took it because Mr. Wiggins felt that that is the way it was going to go, or do you think that he is going to use his own judgment about it?

A. I believe that Mr. Newell will support his every usage of this by his own reasons.

Comr. MCMANAMY. Well, if there is any doubt about that, would it not be well to wait until we hear from Mr. Newell and see what his answers are, and then, if necessary, this witness can be recalled for further cross-examination; but I think it might be in the interest of saving time to allow Mr. Newell to answer those questions that relate to his exhibit.

Mr. SPENCER. He said, as I recall, that he got his traffic figures from Mr. Wiggins, and I assume that was the natural source that he would go to get them.

Comr. MCMANAMY. If Mr. Newell doesn't make those matters (1850) clear to you, we will let you have the privilege of recalling Mr. Wiggins.

The WITNESS. On page 5 of Exhibit 27, I have a summary of commercial freight handled by the Oregon-Washington Rail-

1016 road & Navigation Company during the years stated; it is a connecting line statement received by the O.-W. R. & N. Co.

from connections by junctions. That is compiled from a daily report which the Public Service Commission of Oregon receives from the carriers. Here, again, I might direct attention to the exchange via the Huntington gateway first, the years 1924 to 1927 being shown in the lower left-hand portion of the exhibit, and going from 57,453 cars to 68,580 in 1926, and 61,623 in 1927. Those figures are under the word "System lines." And first junction is Huntington, and those figures range to the right. That is the Huntington exchange with the Oregon Short Line Railroad Company by the Oregon-Washington Railroad & Navigation Company (1851) east and westbound totaled, the Oregon-Washington Railroad & Navigation Company being shown in the upper left-hand portion of the page opposite the town Huntington. The short line is shown directly below, opposite the junction Huntington. You are to understand, then, that the Oregon-Washington Railroad & Navigation Company received from the Oregon Short Line in 1927, through the Huntington gateway, 42,276 carloads. And the Oregon Short Line Railroad Company received from the Oregon-Washington Railroad & Navigation Company at Huntington, 61,623 cars, yes, loaded cars only here. The Oregon Short Line Railroad Company received from the Union Pacific Railroad Company at Granger, for illustration, in 1927, 37,676 cars; that is right according to the report. I don't know how many it delivered to the Union Pacific Railroad Company at Granger; that information wasn't shown. (1852.)

Q. Now, at Ogden the Oregon Short Line Railroad Company received from the Southern Pacific Company in 1927, 50,437 cars; is that right—50,435 cars?

A. Well, that is System lines you are reading under now.

1017 Q. Oh, yes.

A. That is divided as between system lines and foreign roads.

Q. Well, the Oregon Short Line wouldn't receive those there; that 50,435 is received by the Union Pacific Railroad Company, isn't it? Is that right?

A. That is as I understand the system.

Q. The Salt Lake interchange—that is between the Oregon Short Line Railroad Company—it received that number of cars from some railroads at Salt Lake; whether it was the Southern Pacific or Los Angeles & Salt Lake or the Denver & Rio Grande or what railroad, this report doesn't undertake to determine or show, does it?

A. It doesn't indicate by name the particular carriers, groups in this——

Q. Well, is that 36,754 received by the Oregon Short Line?

A. Well, that is grouped as system lines, according to your own classification. (1853.)

The heading says here "Oregon Short Line Railroad Company, Carloads of Commercial Freights Received from Connection via

Junction," that is the way it reads. As to whether the Oregon Short Line received any 50,000 cars from anybody at Ogden, I have to take the report for it. As to whether that Salt Lake interchanges with the Oregon Short Line, I have no means of going back of the report, Form No. 1308, which is rendered daily.

Q. Well, this total, grand total, on page 5 of this Exhibit 27 includes 425,141 cars. Now, were those cars handled by the Oregon Short Line? What is that last summary there?

A. Well, that is just a summary by entire divisions. I make no particular point of that there, so far as detail of the figures and
1018 the left-hand half of the page is concerned, but set it in because they were shown in that summarized form in the report. I can't tell you what company handled that. I have got it by divisions, Utah division, Idaho division, and Montana division.

Q. Looking at this same page 5, the Oregon-Washington Railroad & Navigation Company received, as I read your report, from the Southern (1854) Pacific, at east Portland—that is the interchange between the Southern Pacific and the Oregon-Washington Railroad & Navigation Company, is it?

A. I understand, east Portland, yes, sir.

Q. Yes—in 1923, 14,247 cars; is that right?

A. Well, that is foreign roads. Now, I wouldn't say, nor have I any means of knowing, just what road or roads delivered those, unless you would take them off. There is the Portland Electric Power Company, which I style P. E. P., also, delivers at east Portland. I can't say how many cars the P. E. P. Company handle in there in a year; I can't segregate that because the report doesn't.

Anyway, the same carrier, whoever delivers it, whether it is the Southern Pacific or some other road, it shrunk over 4,000 cars from 1923 to 1927—the figures so show.

This page of Exhibit 27 is a statement of cars loaded at stations on the Oregon-Washington Railroad & Navigation Company for the two years 1925 and 1926. (1855.) As to what purpose that serves in this question as to whether the cross-State line should be built, 1-b in the exhibit was the equipment—to show the equipment classification, as much as is shown.

Now, this average traffic, tons, I believe that is the gross of the car loads. They are both, as a matter of fact. The contents are shown similarly in separate columns.

1019 Q. Now, on page 7 you are settiing up the total freight revenue by years from '22 to '26, inclusive, that is, total operating revenues and operating expenses. Now, that is in Oregon alone. Why, when you include in the other statement here all divisions, analyzing the traffic both on pages 5 and 6, when you get to page 7, the financial statement, do you eliminate all the mileage of the Oregon-Washington Railroad & Navigation Company which is in Washington and Idaho?

A. No, I include it in a subsequent page there, page 9—page 9 embraces the system figures. They are segregated, freight and passenger, State and system. Both are shown. (1856.)

As to whether the Washington traffic practically all comes down into Oregon, that is, the eastbound long-haul traffic of the O.-W. R. & N., I haven't checked that up at all, nor have I undertaken to show that in here. These are selected items, as I say, operating statistics, and so forth, according as the captions indicate, and they are rendered on this basis of segregation because the reports so render them.

Exam. ROGERS. Is that a fact, Mr. Spencer, that all the westbound traffic, the largest part of it, destined to Oregon comes around through Washington.

Mr. SPENCER. Well, no; but the Washington traffic, from Puget Sound on the north and eastern Washington territory in the eastern part of the State, the Yakima branch and all of it, comes down onto the main line, through the Huntington gateway, and runs through Oregon, and in that way Oregon gets a division, under your accounting divisions as prescribed by the State Railroad Commissions, that makes the operation very profitable in Oregon, but at a great loss in Washington, isn't that true?

A. Oregon, according to the accounting classification, would receive a mileage pro rate on such traffic as moved over mileages
1020 in Oregon.

Q. I notice on this page 7 of this exhibit that you eliminate (1857) from the revenues and expenses of the railroad the revenue and expenses involved in the operation of the water lines of the O.-W. R. & N. Co. Mr. Newell made the same comment, that it didn't belong in the railroad operation. Do you have any opinion on that? Was this note yours, or——

A. This note is as carried in the annual report, from which the figures were abstracted. It wasn't by way of elimination. It was rather by way of getting up with sufficient detail as to identify it.

As to whether, as a matter of fact, that water line is operated up on the Snake River to take the wheat from Garfield and Asotin Counties in Washington across the river and deliver it to the railroads, I don't know just what that operation is, and I can't say whether it is an additional necessary service, without additional charges to rail.

Pages 8 and 10 relate to passenger (1858) statistics, pages 7 and 9 to freight. That is State and system. According to this, your passenger revenue shows $4,134,000 practically, in 1922, to $3,103,000 in 1926, and the increase seems to be progressing each year. Passenger train miles per mile of road remained almost constant. Referring to the revenue passengers carried, the shrink is approximately 50 per cent between 1922 and 1926. As to whether that indicates that the local business is gone, and that this long-haul business with the revenue keeps up even to the percentage they have,

I haven't analyzed it nor attempted to analyze all that feature, but I assume that that is at least a partial explanation of it. While something might have been said in Mr. Newell's exhibit about
1021 passenger business for this cross-State line, I did not make any estimate for that. While on that subject, however, the passenger business as reflected by the steam roads would be for rail operations, and the same carriers, of course, render reports covering the bus operations which (1859) have been inaugurated during those same years, that is, during the past few years. They render separate reports; the bus operations of the Southern Pacific and the Union Pacific in Oregon are rendered by report. (1860.)

Acting for the Public Service Commission of Oregon, I have been in charge of assembling and preparing the traffic data for this hearing, after the manner explained. I made a request upon the Southern Pacific Company for a statement of its traffic to and from western Oregon which is the basis of the main portion of the figures that I have presented here in Exhibit 26. I did not make a similar request upon any other railroad. We obtained first-hand from the Union Pacific, O.-W. R. & N. lines, statements which I have likewise put in, but not in just the same detail or the same manner. I did make an effort to procure a statement of the traffic handled by the Oregon Electric Railway Company in western Oregon. (1861.) In fact, I might say that we went a little further than that, and I should correct my previous statement to say that we requested similar information of the S. P. & S. Railway and the Oregon Electric and the United Railways, but were unable to get that in time. In other words, it would involve abstracting it first hand and we could not at the time, in view of the date that the hearing was tentatively considered. We did make the request at approximately the same time we made it upon the Southern Pacific—I believe it was a little bit subsequent to that. I might explain that our offer even as to your [Mr. Dey of the Southern Pacific Company] own
1022 lines, as you will recall from the correspondence, was to take the data first hand; that in lieu thereof you volunteered to have the accounts compiled from your auditing office records or auditing department records. That the other carriers we requested similarly, declined to furnish it, that is by their own man power, and offered the alternative of taking the data we estimated the cost at figures that we felt were perhaps prohibitive, both as to time and money. But the auditing department of the Southern Pacific worked for a number of weeks or months preparing this data for us.

As to wether I have any knowledge as to the amount of east and westbound business originating upon and destined to the Oregon (1862) Electric Railway Company in western Oregon, I have some idea of it, but not detail figures because of the fact that their information rendered throughout the years has been on an electric form, as you know, which does not carry the segregation the steam roads furnish.

Q. Well, it is substantial in volume, is it not, handled over the Great Northern and Northern Pacific, which indirectly own the Oregon Electric?

A. Well, there is some volume. I would not say that I think it is so very great, for the reason I don't see how it could possibly be, bearing in mind the line, its character and its charasteristics.

Q. Well, it runs through a large number of principal cities on both the west and east sides of the Willamette River between Portland and Eugene, does it not?

A. It touches places like Albany and Salem and Eugene on down through the valley; and Hillsboro and Forest Grove, small towns to the west; Corvallis, Junction City, and other towns of
1023 that size. As to whether that business moves to and from the East by routes in many instances as circuitous as the Roseville route of the Southern Pacific (1863), I don't know where it all goes, but I had not thought of it as circuitous as the Roseville; certainly not at the start. What I mean is that it could not come farther north than 123 miles before it heads east, for instance, over the S. P. & S. Railway. It is 123.7 miles to Eugene, which is the southern terminus. As to why I haven't figured that traffic in among the traffic that I say should go to the support of the proposed cross-State railroad, believe me, I would if I had it. If I had the traffic so I could lay it out in strands or blocks like this and see it. That is, if I had the actual records to gauge it from. I don't know what that would be or what it would not.

Exam. ROGERS. You would have to turn it over to the Southern Pacific in order to get it to Crescent, wouldn't you?

A. It would have to be turned over to some connection at Eugene. Certainly the Oregon Electric does not go to Crescent. But I understand there is a physical connection between (1864) the Oregon Electric and the Southern Pacific at Salem, Albany, and Eugene. And if circuitous routes are what we want to avoid then I think that traffic should move over the proposed cross-State line if built, if it could be justly handled; that is, if it could be reasonably taken that way from the carrier that originates it.

Respecting the procedure I would adopt as a traffic man to put the business that originates upon the Southern Pacific lines in western Oregon over this cross-State line, if built, that is a traffic matter pure and simple that originates between the carriers
1024 involved, as a rule, and which the public generally, as a rule, does not initiate the arrangements, but I would think that some joint rate arrangement would be the means by which it might be routed that way, if it could be reasonably done; that is, if it could be done with justice to the Southern Pacific Company. As to whether it would take some voluntary action on the part of the carriers, ordinarily the negotiations for arrangements of the kind originate with the carriers involved.

Q. (By Mr. SPENCER.) In this Exhibit 27, on page 11, you have consolidated there, as I understand it (1865), the operations of the four Union Pacific units, the O.-W. R. & N., the Oregon Short Line, the Los Angeles & Salt Lake road and the Union Pacific Railroad Company?

A. Yes, sir; as embraced in the stockholders' report, some 9,647 miles of railroad.

Regarding Exhibit 28, that is headed "Statement showing estimated tonnages and revenues created by proposed cross-State line in Oregon, eastbound traffic." By the term "Created," I mean traffic that would come into existence as a result of the proposed construction.

Q. And it is not in existence now?

A. Traffic additional to what is existent, so far as the west side is concerned.

Q. And traffic that is not in existence now?

A. Yes; that that is not moving at the present time. Not moving by any route anywhere, and not in existence. In other words, from the estimates for the total traffic has been deducted existing traffic. (1866.)

Q. You make a deduction from Exhibit 28 of the existing traffic; is that right?

A. Well, we might have gotten to that phase of the explanation first. This is merely the raking of the tonnage embraced in
1025 the Teutsch report. Explanations as to the manner in which the tonnages originate were made at the time of the introduction of that report. The Teutsch report covered agricultural tonnage, livestock, and so on, that he considered might move by a cross-State line—created by the cross-State line.

Q. Well now, created; did he undertake to show the total tonnage production of these various counties and allocate to the cross-State line a part of that tonnage?

A. After the deduction, so far as the western Oregon traffic embraced herein is concerned, of existing traffic. By the Teutsch report I mean Exhibit 1 in this case.

Now take apples, for instance, I have got five carloads of apples from Eugene as created traffic, going to Chicago. That is fresh apples. (1867.)

Q. Now isn't it a fact that all these Oregon counties north of Josephine are practically going out of the apple business, don't ship to the apple markets of the East, and can't compete with the fine qualities of fruit packed and shipped from Jackson and Josephine Counties in southern Oregon, and from Hood River, the Milton district, the Wenatchee district, the Yakima district, and the like, east of the mountains?

A. Well, I can't say as to that. My line of investigation did not extend to that; in fact, I did not concern myself with the agricultural conditions supporting these tonnages.

Exam. ROGERS. Mr. Wiggins, just as an explanation, who allocated those five cars of apples to Chicago from Eugene? Did you do that or Mr. Teutsch?

A. Mr. Teutsch vouched for the tonnage used as a whole. I took an arbitrary—took apples, for example, and made a division as to the Chicago and New York markets for the purpose of rating,
1026 it being necessary to subdivide the tonnages according to the probable marketing destination, at least a representative one, due to the variation that goes with the rates. So I divided these tonnages as set up here.

Q. (By Mr. SPENCER.) Did you make this same arbitrary division for pears as between Chicago and New York?

A. You have reference to the six and seven cars?

Q. Yes.

A. I did. (1868.) And green prunes, two cars to either, it being understood that Chicago and New York are being used as typical examples only with a view to obtaining average rate per ton-mile to lay against the haul over the proposed cross-State line. I did not allocate any of that revenue that I put on top of this arbitrary tonnage to the Southern Pacific via the Roseville or Alturas gateways. I left all of it to existing carriers except a very small, meagre sum that is claimed in column 16. The Southern Pacific is not going to get all of that revenue except what I have in column 16, but all that might accrue to it as a result of any arrangement that might be made for moving it that way.

I figure the total revenue, for instance, on these first five cars as $2,250. I am going to route them by the cross-State line. (1869.) Then the difference between $2,250 and $188.77 is divided between the Southern Pacific and the Oregon Short Line, the Union Pacific, and the Chicago North Western, if it happened to be routed that way. That is, other than the $188.77 in column 16. That is all I laid claim to there, was $188.77 out of a total of $2,250. Under the present operating conditions I think that business would move through Portland via the O.-W. R. & N. and the short line, Union Pacific, or via the Southern Pacific and the Union Pacific from Ogden.

1027 Q. Yes; and you are in effect taking from the existing railroads that serve the territory and originate the traffic all of the haul, as the case may be, from Eugene to Ontario, if you would proceed over the O.-W. R. & N. and the Columbia River route on the one hand, or from Crescent Lake to Ogden on the other?

A. Well, in the first place I am not taking this from anyone, and in the second instance, it falls into the same lap anyway, so I am merely allocating for that cross-State sector or distance to the proposed construction. That allocation is on a straight mileage (1870) prorate. The Southern Pacific does not also get a mileage prorate; I have attempted to make no division of the remaining revenue.

I have discussed this division on mileage prorate basis with Mr. Newell. It was my suggestion as to the basis that I thought would be proper to use on the cross-State sector, even though I don't think that it properly reflects what the traffic is entitled to, but I considered it as most ultra-conservative and used it for that reason.

Q. And this created tonnage, I assume, is not Mr. Newell's report, in your Exhibit 28?

A. The created tonnages are shown in there, yes; accordingly as set out in column 16. Now, this is limited to transcontinental business on the eastbound. Of course, the westbound statement begins with page 4 and is different points of origin and destination.

Q. I wonder whether you have anything—I suppose all of these traffic items here, that is the tonnage produced, are taken (1871) from the Teutsch report. On page 2 here, for instance, I notice you have several carloads of nuts originating from Eugene, Albany, and Corvallis, going to Chicago and going to New York. There is not any such movement, is there?

A. There might not— I don't know, at the present time. There might not be. But, as I say, it is traffic that is considered——

Q. You planted some orchards in theory, and harvested nuts 1028 from them and sent them to Chicago and New York——

A. Oh, no; I did not.

Q. And collected $7,000 created revenue; is that it?

A. No, sir. These tonnages are supported by the Teutsch report, with explanation therefor.

Exam. ROGERS. Do you know whether there is now a customary movement from this territory to New York, in nuts, Mr. Wiggins?

A. I would assume that there is some eastbound; I don't know to what destination. But the nut industry has been a growing one in the valley and is considered, I believe, as a very likely source of development.

I think it is a fact that the canned goods of the Willamette Valley and western Oregon country in the main, especially to New York, go by water. And yet I have destined to New York (1872) from Eugene, Albany, and these other towns enumerated, some 67 cars of canned goods. I think there certainly would be some. All allowances have been made for existing traffic going as is.

As to where I get 169 cars of eggs out of Eugene, as appears on page 3 of my Exhibit 28, I get those from the Teutsch report, as explained. As to where the Teutsch report says anything about any such egg production at Eugene, Exhibit 1 I believe covers that. I might say, however, if you care to accept my understanding of it, that eggs at the present time are concentrated at Portland, but that it is reasoned with the proposed cross-State line that this assembly would take place at Eugene; that it is logically located with respect to the most likely development, and that it would be the place for cold storage houses, and so forth, for the future movement. That is, to concentrate at Eugene, from the valley. While there may be no

statement indicating that in the Teutsch report, I am sure that the tonnage is supported there.

1029 As to when I calculated that these revenues would be derived, that is, what period would have to elapse (1873)—as indicated in the individual pages of the exhibit, the first, second, third, fourth, and fifth years following construction. That is indicated on the first page, immediately below eastbound traffic, first year. This Exhibit 28 covers not only the first year, but all five; pages 1 to 6, inclusive, deal with the first year, eastbound and westbound. The remaining years are in the short pages following. As to whether this is additional tonnage that will be produced in one year as a result of the inspiration from the cross-State line, it is the tonnage embraced in the Teutsch report for the first year. I could not undertake to go into detail. And this increased tonnage will amount, according to this exhibit, on page 5, to 67,168 tons, and produce a gross revenue of $730,650—that is the total gross computed at the full rate, but the allocation to the cross-State line is $201,431.53, column 16. (1874.)

Q. Now you take the top of page 5 there, and in the Fort Rock district, which is used now for grazing purposes in the winter when moisture is obtained, you are shipping from that district 42 carloads of cattle and you are distributing those shipments equally between San Francisco, Los Angeles, Portland, and Seattle. Now the revenue to the cross-State line as reflected in your column 16 varies a great deal as to which destination you take. By what process of analysis did you take those 42 cars and find out that they were going to be marketed and slaughtered in equal amount and by equal percentage in those four Pacific coast terminals?

A. I took them as to general designation according to the Teutsch report, Exhibit 1, and, for the sake of rating, and in order to show thoroughly representative mileages and not lay claim to too short a mileage, divided it as between those four principal Pacific

1030 coast markets, feeling that those could be said to be typically typical marketing points, both as to distance from point of origin and as to location and probable market. Those are typical as to the Pacific coast, certainly. As to whether there is anything typical about it when I am undertaking to show all the tonnage that is created, or whether it is just simply comprehensive, style it as you may, the tonnage in Exhibit 1 is supported to these points and the fact is that manifestly (1875) there would not be 10½ cars, but I arbitrarily divided as between the four and naturally happened to have a half car, if that is the question.

Q. You did a lot more than that, didn't you? You had, as a matter of fact, from that Fort Rock country, you had 84 cars, but you divided fifty-fifty between a routing cross-trunk junction—I suppose that means a junction with the—with the Great Northern.

A. Yes, sir; I give them half of it to go down through Klamath Falls, and give the other half to the Southern Pacific to go through Crescent Lake.

Q. And you take, for instance, San Francisco, you are going to haul that up the mountain and then down the mountain, and then down over the old Siskiyou route to San Francisco?

A. I don't see anything about the Siskiyou route there. I don't haul it over the Siskiyou Mountains; it does not go that way. I turn it over at Crescent Lake, and it moves down via that new Natron cut-off—the flyer—into San Francisco. (1876.)

Exam. ROGERS. (Referring to the Teutsch Exhibit 1.) Show us, on page 5, where you get the carloads of cattle in the Fort Rock section.

A. Fort Rock would be in the northern part of Lake County. Page 10, third item, 84 cars from northern Lake County, we having to establish the station of Fort Rock, which is in line with the proposed cross-State line.

1031 Exam. ROGERS. But there wasn't anything in the Teutsch exhibit showing where these cattle were to go to? You determined that?

A. Oh, no; this was determined in the full detail of the report, which I had to work from and which I obtained from him (1877) by way of designating the marketing and originating points.

Mr. ELLIS. To make that clear, part of it is in Mr. Teutsch's verbal testimony and it does not appear in the printed exhibit but it was all explained I think in his testimony as to why he figured it would move to the given market.

The WITNESS. No; I called upon him for as nearly specific points of origin and marketing destination as possible, in order to get as accurately as possible at the proper rate, there being none published from a point like Fort Rock.

Q. (By Mr. SPENCER.) Well, did he agree with you that you would just take so many head of cattle and divide them equally between the Great Northern junction and the Crescent Lake junction, and then on the volume that went through each junction you would divide that equally between San Francisco, Los Angeles, Portland, and Seattle?

A. No; we agreed as to the marketing destination and the arbitrary split as between the two junction points I made; likewise the selection of the four points, that is to use the four distances, San Francisco, Los Angeles, Portland, and Seattle, for the sake of obtaining a more representative average ton mile rate. (1878.)

These rates—I took the existing published tariff rates, there being no published rate from a point like Fort Rock, for example, would reach back to Ontario, or if it were going eastbound, why, I take the Eugene rate, applying as maximum to intermediate territory.

1032 On cattle I use the commodity rate in some instances, and the distance scale in some instances for joint or single-line haul, as the case may be; two-line haul in every instance, I believe. There is no distance scale for a two-line haul on cattle. I am speaking now of other commodities in there, as hay and grain.

Q. Well, now, you get down to sheep and hogs, you split them—you give them all to the Great Northern at the junction there, do you not, 352 cars of sheep and hogs?

A. Well, shipments of straight hogs were so allocated. There follows shipments of calves and hogs, which should go via the Crescent Lake routing. (1878–a.)

I don't recall any shipment of hogs from Crane in any direction, but, nevertheless, Crane is merely stated there as a logical point for them to come onto the cross-State line. (1878–b.)

I have been to Crane. As to whether I know as a railroad man there is not a chance for 88 cars, or 8 cars, of hogs from Crane—well, I don't know what there is in that line there at the present time, but this is under the created traffic, even at that. As a railroad man I know where the wool goes in this Northwest country—I have been in these wool hearings.

Q. Now, on page 3 you have got the wool going to—where does that go? Chicago and Boston? Every pound of it comes to Portland, doesn't it?

A. No; I don't know that it does. However, I didn't concern myself with that, either, even though I asked the question just as you have asked it. (1878–c and d.) I would not say that this estimate is incorrect. In this limited quantity I wouldn't say so. It seemed to be the general consensus of opinion that there would be some such amount move by rail, and I understand some cars, but I think that most of the wool will go via Portland. (1878–d.)

I don't know the amount of wool that moves east by rail and by water; I couldn't give you that over any recent or compre-
1033 hensive period, except that it is my understanding that a very large percentage moves through Portland, by water. I took this allocation at the hands of (1879) Mr. Teutsch as in Exhibit 1. I maintain my right to my own view of it regardless, but I didn't quarrel about it. As to whether I knew Mr. Teutsch wasn't a wool shipper or a traffic man, either, I know he is an "agriculturalist" through and through. He is all over this State, and he knows just about what is going on.

Q. Sure—and he convinced you that wool from Bend, forty-nine carloads, would go east to Boston and to New York by rail, is that right?

A. No, sir; I accepted his final determination that there would be that quantity move that way.

Q. And you always agreed with him, did you, as to the routing of these different commodities?

A. I didn't in every instance. I think in most instances that the reasons that he has in support of that are sound. I believe that it is substantially correct, but manifestly there might be some difference of opinion respecting a single commodity.

Q. Now, I notice on top of page 4 here of this exhibit you are taking his opinion that there will be 385 cars of new traffic, con-

sisting of corn to Eugene, the first year that this railroad is in operation. (1880.)

A. I took his report for that 385 cars; yes, sir.

Q. What kind of feed is this here right under the corn? You have got several hundred carloads of feed there.

A. That would be largely grain—that is, wheat, and, I think, barley, and that sort of stuff, grain classification.

Q. You are going to bring that over from Crane and deliver it at Eugene, or at these towns mentioned, is that right?

A. As supported by the report; yes, sir.

1034 Q. A hundred cars of it to Corvallis. What is that, chicken feed or—is that mixed feed, or is that a straight by-product from the manufacture of flour, and so forth?

Comr. McManamy. You can hardly expect this witness to answer that question, can you, Mr. Spencer?

A. I took the report for that. I took the report for it. As a matter of fact, my understanding of it is it is largely chicken and dairy and other feeds, but for all practical purposes I took it as grains and gave it a rating accordingly.

Mr. Spencer. The commissioner asked if you would be expected to know about that. Now, you have been over to Crane several times. There has got to be a mill there, hasn't there, to grind out feed, seven hundred and some odd cars?

A. No, sir; this is listed as feed, but I treated it as grain, and I understand it embraces very largely wheat, barley, and that sort of thing, which it is considered would be raised. I have given it the grain, flour and feed rating, and I don't (1881) see anything wrong with that.

Q. Well, it is wrong with the production—that is what I am getting at—at the originating point.

A. I can't vouch for that feature of the exhibit, Mr. Spencer.

Q. Now, Mr. Wiggins, here you have got some horses and mules that are coming across there from Crane, 36 carloads, divided equally 9 cars to San Francisco, and 9 cars to Los Angeles, 9 cars to Portland, and 9 cars to Seattle. Are those those wild horses that are to be made into canned meat, pickled meat?

A. I will tell you, I didn't ask him what kind or brand. I took them, horses and mules, as stated.

Exam. Rogers. Where does he get the mules?

A. They were in the report, Mr. Examiner.

Exam. Rogers. What I have in mind, as to Harney County I don't see any mules, on pages 5 and 6.

Mr. Spencer. Do you know whether they have—of course,
1035 you determined whether they go to Los Angeles or Portland, but do you know whether they eat any horse meat down at Los Angeles, or pack any down there?

A. I have seen a packing plant down there, but then I don't know about the horses and mules. The agriculturalists vouched for them—I rated them. (1882.)

I would like to say, by way of explanation as to these points that are used, right here, that manifestly I contend it is fairer from the standpoint of the per ton—average rate per ton-mile to average in these distances to San Francisco, to Los Angeles, to Portland and Seattle, than to arbitrarily eliminate or select the shortest mileage. I think that the inclusion of those distances is eminently fair.

Q. Whether the traffic moves or not?

A. Oh, I don't—I had nothing to do with the marketing destination of those, but I am merely explaining the arbitrary split as between the markets, so as to take those distances in there. In other words, if I would take the short distance, the Portland distance, and compute it on that alone I would naturally throw against it a much higher rate per ton-mile, but when I take them in I pull down the average rate per ton-mile, and bearing in mind the marketing centers I think it is eminently fair. As the distance increases the rate per ton-mile decreases, and I am laying that lesser average only to the cross-State section.

As to whether the estimated tonnage and revenue created by proposed cross-State line in Oregon, eastbound, referred to on page 8 of Exhibit 28, is local, this is just as substantiated in the report (1883), Exhibit 1, and the witness rendering same, used for the third year, and was ascertained or figured in the same manner as provided in sheets 1 to 6 for the first year, but is stated here in abbreviated form for convenience in typing and reproducing copies. The 1036 calculations were obtained by the same formula as applied in sheets 1 to 6, inclusive—still based on the Teutsch report. I don't undertake to vouch for the traffic, either in volume or destination; I accept the tonnage allocations as to marketing destinations as supported by the report. (1884.)

To explain the reason for not including an estimate for the second year, that is included in the summary, being the mean of the first and the third.

Redirect examination:

Referring to my first compilation, Exhibit 26, and the (1885) numerous questions asked about my Multnomah County traffic, Tillamook traffic, I individually have not in any of my exhibits attempted to allocate in any way traffic from those counties to the cross-State line, as that traffic is set up in Exhibit 26; I attempted to merely show the traffic by origins and destination.

Exam. ROGERS. Now, did you confer with Mr. Teutsch about it. or give him the benefit of your judgment as a traffic man, as to where it should go, or how it should go—I am referring to the agricultural statement.

A. No, sir; not particularly. I did discuss—have discussed—in fact, it has been discussed up one side and down the other for the very best information and judgment available, and threshed pro and con all the way through, so far as that feature is concerned, but I didn't attempt to substitute my judgment on the marketing destination of this, but I accepted that as his final determination.

Exam. ROGERS. Well, was there any case in which Mr. Teutsch's first views were obtained after conference with you?

A. Well, I don't know to what extent Mr. Teutsch re-worked
1037 or changed any figures. I presume—I don't know as to that,
but I presume that he was continuously after it, and I assume
(1886) that if for any reason there was a reason for changing a figure that it was changed in advance of my using it.

Exam. ROGERS. What I had in mind, Mr. Wiggins, was whether these routings and destinations and split-ups simply reflected Mr. Teutsch's judgment alone, or whether it reflected the combined judgment of yourself and Mr. Teutsch and Mr. Newell and whoever went over it?

A. Well, I think that it is very largely a composite, I should say, as a result of all the pains that could be given to it. That is my—of course, you understand, Mr. Examiner, that you were pointing out Exhibit 26 at the time you were questioning me.

Exam. ROGERS. Well, I meant as to created traffic.

A. As to created traffic; yes, sir. As I stated.

Mr. ELLIS. But as to Exhibit 26, you have not in your subsequent exhibits attempted to apply rates or earnings to any part of that tonnage?

A. No; and likewise Exhibit 28 doesn't embrace any part of it.

Q. Some question was asked about the movement of Klamath Falls tonnage via the cross-State line. Have you in mind the distances to Granger via the cross-State line from Klamath Falls as compared to the distance via Roseville, or have you made any check of those figures?

A. Well, I have—I haven't in mind just the specific, but it is included in the zone that is shorter via the cross-State (1887) line.

Exam. ROGERS. Well, does that have any particular significance to you, Mr. Wiggins, the fact that it is shorter? What I have in mind is what you said about Portland this morning.

1038 A. Only as distance might be a factor. In other words, the
equi-distant point drops, I think, some 20 or 25 miles south into the northern California country out over the cross-State as against the Alturas route—that is, the Roseville routing.

Mr. ELLIS. To clear up a point as to Oregon-Washington Railroad & Navigation Company branch lines in Oregon, could you take your Exhibit No. 27 and describe briefly the territory served by each of those branch lines?

A. Yes; I can do that briefly, I believe. The Des Chutes branch extends from Sherman to Bend, approximately 150 miles.

The Shaniko branch is the next branch line to the east, and extends from Biggs, the main line junction point, to Shaniko, approximately half the distance of the Des Chutes branch. It is in Sherman County. (1888.) From Biggs to Shaniko is 69 miles. The Condon branch is the next to the east, extending from Arlington to Condon, 44 miles. And east of that from the main line at Heppner junction to Heppner is the Heppner branch, 45 miles. All of

these branches I have just enumerated extend in a general southerly direction from a connection with the main line with the Oregon-Washington Railroad & Navigation Company along the Columbia River. They drop off from the river line to the south. The Pilot branch is from Rieth to Pilot Rock—that is near Pendleton— and is approximately 18 miles long.

Then continuing the main line to La Grande is the junction of the Joseph branch, and that extends from La Grande northward through Looking Glass and Wallowa, through Enterprise, to Joseph, in Wallowa County, a distance of approximately 84 miles. (1889.)

That list includes all of the O. W. R. & N. Company branch lines within the State of Oregon—those are the 6 O. W. R. & N. Company's branch lines of O. W. R. & N. Company operation.

1039 There are two other lines, there, I believe, the Homestead and possibly the Brogan, but I believe they are leased to and operated by the Oregon Short Line. All these branches I have listed in my exhibit, except the Joseph branch, extend in a southerly direction from the main line, pointing towards the interior.

Recross-examination:

I don't mean to say that there are not branches from the main line extending up into eastern Washington to the north; there are branches in eastern Washington from the Oregon-Washington Railroad & Navigation Company line that runs to Spokane, or to Marengo.

Q. Well, there is a secondary line from Pendleton up to (1890) Walla Walla, with branch lines—I don't know what is meant by these inquiries about the branch lines in Oregon if there wasn't any in the other direction. You run into the State of Washington when you run up in the other direction, and you find them there, don't you?

A. Well, there is a line that runs northeastwardly from Pendleton to Walla Walla and beyond. Some style it main line, and some style it branch, but I——

Mr. ELLIS. We are willing to stipulate, Mr. Spencer, that eastern Washington is well served with lines of all kinds, so there won't be any question about it.

(Witness excused.)

Mr. ELLIS. The Prineville interveners would like to be heard at this time, and we have agreed to stand aside temporarily. (1891.)

1040 Mr. BECHTELL. If the commissioner please, the city of Prineville, Crook County, and the Prineville Businessmen's Club have filed their petition of intervention, in the main accepting the theory and supporting the theory of a cross-State road, but proposing an alternative route from Burns to Prineville. We expect to put testimony in particularly affecting this road that we propose and the intermediate territory. Testimony has already been submitted by the counties in eastern Oregon and southern Idaho as to traffic

tonnage, which we are willing to accept, and accept that as testimony in behalf of our case, inasmuch as we expect to contend that that will also be served by our proposed route, and it would be only be duplication for us to put such testimony on.

We also understand that the complainant has submitted testimony of a proposed route through the Hogg Pass by the testimony of Mr. Griswold, the engineer, and inasmuch as we expect to use that route, at least to cross the pass to eastern Oregon, but going further north to connect with our route, we are willing to accept that testimony, too, in so far as they join us, if possible, through the Hogg Pass route.

Comr. McMANAMY. That may be done. Proceed.

1041 C. W. WOODRUFF was thereupon called as a witness on behalf of the Prineville intervenors, and, having first been duly sworn, testified as follows:

Direct examination:

I reside at Prineville, Oregon. I am manager of the city of Prineville Railroad and have held that position for 4 years. The termini of the city of Prineville Railway are the city of Prineville on the east and Prineville junction on the west, where it connects with the Oregon trunk and the Des Chutes branch of the Oregon-Washington Railroad and Navigation Company. That is a standard gauge railway engaged in the carriage of interstate traffic. For 5 years prior to the time that I became manager of this railway I was resident engineer for the State highway department at Prineville. While I held that position I had charge of the location and construction of the Ochoco Highway from Redmond to Mitchell—that is about 75 miles—with the exception of a small section in the forest reserve; and with the Crooked River Highway, from Prineville to a (1893) point about 10 miles east of Post, which would be about 52 or 53 miles; and then also the market roads in Crook County.

As to the State highway development that has occurred through this particular section of Oregon: There has been constructed the road from Redmond to a point about 10 miles east of Mitchell, on the Ochoco Highway, which is a through highway going east and west across the center of the State. The highway has been built up Crooked River, and almost finished to Paulina, 72 miles. There has been a stub highway built up Bear Creek about 12 miles by the State, and then has been carried on and extended up Bear Creek some 24 or 25 miles by the county. The highway connecting Redmond and through Prineville and Mitchell is part of the Ochoco-McKenzie Highway. It is a national highway east and west

1042 across the State. It connects clear across the State, except for a short gap that is uncompleted east of Mitchell. That is only a matter of completion. It is ordered. I understand it is on the highway system project. (1894.) Between Redmond and Mitchell, I would say over half a million dollars has been spent on

that particular highway. About $400,000 has been spent from Prineville on the Crooked River Highway east.

I am a civil engineer by profession. I am a graduate of the civil-engineering department of Iowa State College, Ames, Iowa. I have continuously practiced my profession. As to my experience in engineering: I worked for some five years in the Middle West for the Burlington Railroad, then I came to Oregon and worked on various logging roads on the west slope of the Cascades in Oregon and Washington, and then after the war I went into central Oregon with the highway department, been there ever since. I have had considerable experience in connection with railway engineering. (1895.) Last week and prior to that time I traversed the territory from Prineville to Burns, and took particular notice of the country with reference to the building of a railroad between those points, but never made an actual survey of it; sort of a reconnoissance.

As to my observations relative to engineering features, topography, and so forth, in connection with the road from Prineville to Burns: There is a very good route going from Prineville connecting with the city of Prineville Railway east up Crooked River to Paulina, and that distance is 72 miles, the Crooked River rising some 800 feet in 72 miles.

Then you take Beaver Creek, a little to the north and still east, on the south fork of Beaver Creek to a place near Howard Valley, at which place you follow the divide into Silver Creek and follow down Silver Creek into Riley, and thence into Burns.

1043 Exam. ROGERS. So that I might understand you a little better (1896), just what is the thought of the interveners, now, as to what ought to be done here. What are you contending for?

Mr. BECHTELL. We propose, instead of a line being built from Crane to Odell, as proposed by the complainant, to take the line from Burns, which connects with the Crane extension to Burns, and carry that through to Prineville, which connects with the city railway, 19 miles in length, which connects with what is known as the Des Chutes Line of the Oregon-Washington Railroad & Navigation Company and the S. P. & S. Railways at Prineville junction, 3 miles north of Redmond.

Exam. ROGERS. And stop there?

Mr. BECHTELL. Well, we stop there, unless it shall develop that it will be possible to continue through to the west over what is known as Hogg Pass to Albany, Oregon.

Exam. ROGERS. The complaint in this case goes from the Point near Crane west to a point on the Southern Pacific.

Mr. BECHTELL. Yes; well, that is true. We attempted to avoid any common user rights by connecting up with the same railway, rather than a rival railway.

Exam. ROGERS. You don't intend to connect with the Southern Pacific, then?

Mr. BECHTELL. No; it isn't possible. I presume it wouldn't be feasible, I wouldn't think. (1897.)

Exam. ROGERS. What was the purpose at the outset in referring to Mr. Griswold's testimony? I think at the start you referred to accepting Mr. Griswold's testimony.

Mr. BECHTELL. Well, with this exception, I believe that his testimony took it to Bend, which is approximately 20 miles farther south. His road could be swung from the town of Sisters, east of the Cascade Mountains. Our connection would be almost directly
1044 east to Sisters. His swings south to Bend.

Exam. ROGERS. What I am trying to get at, what would the commission grant in this case to follow your suggestion, to follow your case?

Mr. BECHTELL. Well, we feel that we can serve the eastern Oregon territory and Idaho from that standpoint with a shorter route to Portland and a very little longer route to California points, and by the extension through to Albany over the Santiam, a connection with the roads in the Willamette Valley can be made in that way.

Exam. ROGERS. Are you going to contend here for a connection right from Prineville to Albany?

Mr. BECHTELL. Yes; ultimately that is the idea.

Exam. ROGERS. Well, are you going to contend that in this case?

Mr. BECHTELL. Yes; that is what we ask in our petition. We
(1898) cover that.

Exam. ROGERS. All right.

Mr. BECHTELL. However, we figure that immediately at least a part of the relief can be obtained by connecting with the Des Chutes line of the Oregon-Washington Railroad & Navigation Company, and if not possible at this time, the ultimate possibility of a connection with Albany.

Exam. ROGERS. Well, you didn't think Mr. Griswold's testimony would be sufficient to justify the extension from Prineville on over to Albany, did you? Did you hear it?

Mr. BECHTELL. I don't know how comprehensive that was. There has also been a prior survey, what is known as the Corvallis and eastern road, that surveyed through there at one time, a number of years ago, but I don't know as to its feasibility. It is gen-
1045 erally presumed to be feasible. I can't say from an engineering standpoint myself.

Mr. MCCULLOCH. Well, Mr. Bechtell, wouldn't Prineville's intervention be satisfied if the commission ordered the construction of a line of railroad from Burns to Prineville?

Mr. BECHTELL. Yes; I might add that that would give us at this time the Great Northern—we have a connection by the extension of the Great Northern from Bend to Chemult, on the Southern Pacific route. I was in error when I said we couldn't connect with the Southern Pacific, but we can through that way; that gives us a Southern Pacific connection by way (1899) of the Great Northern through a connection with the Southern Pacific on the Natron cut-

off. Would you state how, in your opinion, Mr. Woodruff, the purposes of this petition and the providing of adequate railway transportation for these various territories may be served by this proposed Prineville-Burns route?

A. This line of connection from Burns through Prineville to the main line, the two lines in the Deschutes, would then give you a connection south to Klamath Falls and to the Southern Pacific line just the same as if you connected directly. It would be a little longer—it would be from 60 to 75 miles longer from Burns around through Prineville than the other way. I think the distance to Portland from Prineville Junction is a little greater than the distance from Crescent Lake, but it would give this advantage, that anything that originated on the Union Pacific in the eastern part of the State could be handled by them into Portland over their own line.

Comr. McMANAMY. Is that longer or shorter than the Columbia River line?

1046 A. Well, at the present time you go down the Columbia River, and then down the (1900) Deschutes and in.

Comr. McMANAMY. From where you leave the main line at Ontario, how long is the line by way of Prineville as compared with the line over the Blue Mountains and then in?

A. I don't think there would be a great deal of difference.

As to the advantage of going through Prineville: If you are going to build the cross-State line you would develop a country that is now further developed than any other country east and west, anywhere in that section of Oregon, and a country that is capable of greater future development and greater through tonnage than any other route that you can pick across there. If you will look at the map you will see that the forest area in central Oregon lies north of the line there from Prineville to Burns, and that in that area there is much more agricultural development at this time than in any other section that you will take across the State. In the timbered areas you have the watered areas, and that country is now dotted with farms and stock ranches all the way through, and, if you take your line, the topography of the country in there is such that Crooked River is the dividing line between that tonnage and the south; there is a range of hills from the south of Crooked River, between there and the desert, that there are only two points of entry—one is at Prineville, and the other is through Silver Creek, and any (1901) line that is built on the so-called desert, or skirting the so-called desert on the north, wouldn't get this tonnage in the Ochoco district, as it is called, and the line that would be built across there would still leave that country open for a line that would enter by the way of Prineville. The grades are quite easy. You would have as a maximum not to exceed 1½ per cent, and that only for a few miles. I don't know what the maximum grade is on the Columbia River route of the Union Pacific. (1902.) It is my understanding that it is more than that.

1047 Q. How does that territory that you are describing lie relative to the surrounding railways, particularly the Union Pacific system?

A. The map indicates that very well. The branch that comes in from Burns cuts off the territory to the north. The line of the Union Pacific skirts all around that territory. Then they have the branches into it from the north. You have got your Shaniko, Condon, and Heppner branches going in there. And you have an immense territory there in the center that is now not served by any railroad. Take Wheeler and Crook Counties, they are without any railroads at all—a little stub end of a railroad in Crook County, and one in Wheeler, very little in Grant, just on the east side.

Q. Has the building of the Great Northern extension to Klamath been a factor in location of this north and south road over the former original petition, it having been built in the meantime since the original petition was filed?

A. Well, it now gives you a connection from Prineville to the south, to the San Francisco market. It would make a stronger case on that account for the proposed Prineville-Burns line. You can now route it south. (1903.)

The map shows that if you had the completion of a line from Burns to Prineville you would have that northeast quarter of Oregon entirely surrounded and served by the Union Pacific Railroad, especially with the extension of branch lines. Those branch lines of the Union Pacific only touch the outer edge of that territory and do not fully develop the intervening territory.

I just have a knowledge that there is a great deal of land in our country that comes under the Federal Government grant to the Willamette Valley and Cascade Mountain Wagon Road Company, made a great many years ago. (1904.)

1048 (The map so offered and received in evidence, showing the routing of that road grant through central Oregon, was thereupon marked "intervener's Exhibit No. 29, Witness Woodruff.")

This grant was made some time prior to 1870 and was for the purpose of connecting eastern and western Oregon and developing the territory between. This grant was for the purpose of constructing a wagon road, and the terms of the grant were to build a road from Albany to the Harney Valley to the eastern boundary of the State; and there were no strings on to the location in between. These people were to be paid—they were to construct the wagon (1905) road; they were to receive as pay three sections of land, which were to be odd sections, three sections of land for every mile of road constructed.

Now, they had but two things to do: One was to pick a reasonable route for a road, and another one was to get the most valuable land that they could, because in that way they got their pay. And it is noticeable that they started from Albany, went directly over the Santiam Pass, through Prineville, to a point about 13 miles east

up the Ochoco, which took them about to the edge of the timber; then they turned south into Crooked River to skirt the timber on the south, followed up Crooked River until they almost reached the timber, when they swung south through the open country, around what is known as Suplee, then through the timber in the Snow Mountain district, in the Silver Creek Valley, and thence to Burns.

And it is also noticeable that through this district—and this land, I might say, was to be taken in a strip 6 miles on either side of their located lines, and it is noticeable that in this grant, on the map showing the land that they have taken up, that wherever they had any land left, or any land that they could not get, they have gone into this district, and that through almost the entire distance between Prineville and Burns they have taken, not three sections
1049 along each mile, but six, showing that at that time they considered (1906) that the better land along their route, and they have sidered (1906) that the better land along their route, and they have chosen this, if you will notice, with particular reference to getting agricultural land rather than timbered land. The greater proportion that they have taken is agricultural land; that is, land at least other than timbered. The greater part of it that is not agricultural land would be grazing land. There is a vast amount of timber land. The most of their timber land is where they cross the Cascade Mountains. As to how that route compares with the route I have specified here as the possible railway route from Prineville to Burns, it is approximately the same route. (1907.) It is the Oregon Western Colonization Company now. That is the balance that is left. I think the greater part of it has been sold; at least through Crook County. And that is held by individual owners. The bulk of the land along the Ochoco and Crook River that is tillable land, is now under cultivation.

The forest products would be by far the greatest products of traffic that would be available to this Prineville-Burns route, if constructed. You would have the livestock and dairying and agricultural products, and some minerals. That traffic in that particular section would not be available for routes further south located on what is known as the desert. As to whether it would have to find an outlet in other ways, there are just two openings through that country: One is through Silver Creek, at Burns, and the other is down Crooked River through Prineville.

There is planty of water practically all the way from Burns (1908) to Prineville, even for railroad purposes. As to whether it would not be similar to the desert country in the operation of the railroad: That country is well watered.

1050 As to whether I have heard of mineral resources in Crook County, in the Ochoco country: We have two quicksilver mines now that are operating and shipping quicksilver. There is an old gold discovery on the Ochoco which has been mined and worked for, I don't know how many years; a good many years apparently.

They tell about it as far back, I guess, as 30 or 40 years or more. They have shipped some ore out of there. At the present time it is not working. I am quite well acquainted with one of the owners of that particular property, and it is a low-grade ore, which has to have pretty good facilities for shipping to make any money. There seem to be possibilities of mineral resources if transportation is available.

This territory is not adequately served by the railroad which you have, the Prineville Railway, at the present time (1909) because the distances are too great. The city of Prineville Railway now draws from a territory 70 miles or more to the east and to the northeast, but their pricipal products are products that they can bring out on their own feet, cattle, and sheep. There is very little agricultural development. They don't raise grain in there because they can't afford to haul it to the railroad. A railroad only develops a territory within a reasonable distance on either side of it or past its end.

I have heard of the diatomite deposit near lower bridge. That would be very close to where any extension west from Prineville junction would be. In fact, it is very close to the railroad right now. It should be a possible tonnage for a railway. I am sure I don't know where the market would be for that. (1910.) I don't know if it would be probably east. I could not say.

My proposed route would extend easterly from Prineville up Crooked River. It would reach its highest elevation at the head of Silver Creek, somewhere near the Allerson ranger station. It would reach an elevation of about 5,350. The elevation at Prineville is about 2,800. I did not make any estimates of the
1051 cost of construction of a line through that territory. (1911.)

From the head of Silver Creek it is my proposal that the line should follow generally down the course of Silver Creek to Riley, and then would go south of Riley a little and then into Burns. You encounter nothing exceptionally difficult in getting into Burns on that route. There is rather a sharp fall in the topography as you near Burns from the direction that I suggest for a few miles. You would have to support your grade down Silver Creek.

Q. That would require rather heavy construction and fills at that particular point?

A. Yes; that would be heavier construction than where you can follow water grade or the bottom of a stream.

As to whether we would find it necessary to construct many trestles or fills along other parts of our proposed line: You would have to support up on the north side coming out of the South Fork of Beaver Creek, but not so far as you would on the Silver Creek side. At the same time, you would have either a very heavy cut or you would have a short tunnel, and the rest of the line I (1912) don't believe offers any particular obstacles.

As to the type of line I had in mind when I made my observations through that section of the country: I figured a good line. I would say that such a line as I was thinking of would be a better line than either line up the Deschutes Canyon. I could not give any estimate of the cost of construction per mile. Such a line would not be readily accessible from the south on account of the rough broken country south of Crooked River. As to whether that is also true from the north, not to such a large extent. The Crooked River country is all rather rough and broken. My proposal would place the line down in the canyon, in the Crooked River Canyon.

1052 As to what proportion of the (1913) timber tonnage indicated in the green area on the map before me, which is a duplicate of Exhibit 17 in this case, would, in my opinion, be accessible to our proposed line: I would say that you take the timber, that is, from the very beginning of the timber directly north of Prineville, following through this line would go through the Ochoco Forest, and you go through the timber that is on the head of Silver Creek, and I would say that about two-thirds of that timber would be accessible to this line; that is, that would be logged on to this line. Now that would leave out the timber from directly north of Prineville east to the east watershed of Mill Creek.

Mr. BECHTELL. That might help you (passing map to witness).

The WITNESS. No; I have it in my mind; and that timber which would be logged down McKay Creek directly north of Prineville.

Q. (By Mr. ELLIS.) To what extent do you include in your figures the timber adjacent to the line now extending north from Burns to Seneca?

A. Well, the timber naturally divides there at the South Fork of the John Day River.

Q. And to what direction will that on the South Fork of the John Day River go?

A. The timber on the east of it would naturally go into Burns. The timber on the west of it would naturally come into the (1914) Prineville district.

I could not tell you how near that dividing line is to the present terminus of the Sumpter Valley. Of course, you understand, now, there is some timber on the north slope of that watershed that would naturally be logged out to the north, probably by the means of small mills. I don't know how near that dividing line is that I spoke of on the John Day to the present line at Seneca. It lies a consider-

1053 able distance west of Seneca. The line that we propose, in my opinion, would be of no value or service at all to the Fort Rock Valley, or to the area in the vicinity of Alkali Lake.

Q. And the tonnage that you had in mind, that would be served by your proposed line, would be largely timber and agricultural tonnage along the Crooked River and immediately adjacent to your proposed survey?

A. Well, the same answer is true of an east and west line going through the Fort Rock district. That is of no value to us, except that we would want to send something around that way east. They could send something around our way east as well as we could send it around their way east, but on this line of ours you have a timbered and agricultural country practically (1915) the entire distance.

It would not be necessary, in order to serve all of the timber area that I refer to, to construct a logging, or some other type of railroad, generally along the course of the Ochoco Highway. As to whether the timber along the course of the Ochoco Highway would be tributary to our proposed line without additional construction, you have to construct your logging roads into your timber, no matter which way you go in. But this timber could be developed to the south as well as to the east; that is, into Crooked River as well as into the Ochoco; and for the man that owns the timber it would cost him less money, I mean less main line for him to bring his stuff out to Crooked River rather than to bring it out to Ochoco; understanding, of course, that the timber now west of Mill Creek would not log that way at all. There is a large unit that is directly north of Prineville, and that would come into Prineville and would not come in either to the Ochoco or Crooked River; it would come down McKay Creek into Prineville and would be milled at Prineville. After being milled, I presume it would all go east. (1916.) It would go over the new line that we propose.

1054 With reference to this wagon road land grant, I did not testify concerning the extent to which that road was actually constructed.

Q. Do you know anything about whether it was constructed?

A. Why, I know in a general way that a good part of it. It was through our country. I can route it for you.

It generally follows the course of our proposal, with the exception that it goes up the Ochoco about 13 miles and then goes across into Crooked River. I can't say whether there was any substantial construction on that line. That portion through our country is in use to some extent today. It is just a rough forest road. There has been a new road built around through Crooked River, up the Crooked River, that takes the place of that road that they built from the Ochoco across the hills into Crooked River. I don't know whether that was one of the first roads authorized and built in the State of Oregon. It dates some time prior to 1870. The fundamental reason which was back of (1917) that project was none other than to connect eastern and western Oregon.

As to whether these quicksilver mines that I refer to would be served by the proposed route that I suggest: Not any more so than at this time, except that if their product went east then it would be on the east and west line when it was delivered to the carrier. It would be delivered to the carrier at Prineville, and the materials and supplies that they use would be received by them at Prineville,

whether it came from the east or the west. It would merely be served on its ultimate haul from Prineville. That would also be true of the gold mines I referred to.

Q. Did you have in mind any other milling point for your timber than Prineville?

Mr. McCULLOCH. The timber tributary to this line you have advocated?

A. I presume that the Silver Creek timber would be milled at Burns; the other would be milled at Prineville. It might be milled in the timber east of Prineville.

1055 The longest distance that you would get over our proposed line from Burns to Prineville would be (1918) around 160 miles. I believe that could be shortened considerably. In shortening the distance you would not increase the grades. I think your shortening would be particularly done between Prineville and Paulina.

The sawmill at Prineville would bring the logs in from this timber and saw them into lumber and move them back over the line east; that is my idea. That log haul would have to extend about 30 miles out into the timber east of Prineville. They might haul some farther. It might be practical to go farther east and tap the timber rather than to build extensive logging lines. And it would be entirely possible that some of that would be logged farther east than the city of Prineville. When I say "logged," I mean milled.

I cannot say how the cost, in my judgment of getting out the logs and then shipping the manufactured lumber to eastern markets over the line from Burns to Prineville, or from Prineville to Burns, as I advocate, would compare (1919) with the cost of providing that same timbered area that would be tributary to our line with extensions and branch lines of the existing line from Burns to Seneca and with extensions and branches from the existing terminus of the Sumpter Valley Railway. That is something that we have never had the time nor the money to investigate. I believe it is entirely possible to get a line across from the Seneca line into Prineville that would mean considerably less construction, probably would be a very good line, but it takes time and money to investigate that. We feel that this line we have presented is a line of good trade, on which a good line of road can be constructed. I have not made enough investigation to be able to give an opinion as to whether the route that I have advocated here would be the most practicable and the most economical means of getting the logs to a sawmill and sawed lumber to eastern markets.

1056 Q. The timber in southern Grant County and in northern Harney?

A. No; I have not.

It would be somewhere in the neighborhood of 70 miles farther from Crescent to Crane over our proposed route than it would (1920) be over the direct cross-State line. The distance would be 30 miles via our route from Crane to Burns. It is 160 miles across there.

It would be 190, and it is 90 miles to Prineville Junction. It would be about 210 miles to Prineville Junction. Then you would have to figure from there down. That would get you to Crane, or, if you are going to Burns, it would be 30 miles less.

I understand it would be an advantage on that distance via the Crane route where to cross the Great Northern you have to go some 18 miles west to an elevation of 4,700 feet, whereas by the Prineville connection with the Great Northern you would stay 18 miles farther east, at a lower elevation, and have that less distance than that triangle up to Crescent Lake. That would be an advantage to that extent, to the Prineville line. (1921.)

Cross-examination:

I have been operating in that country there for a number of years in highway construction and in timber properties, and in the management of a railroad in there. I know that country fairly well between Burns and Prineville, or Burns and the Cascades.

Q. Is there any line in your opinion that can be sustained to the point of paying its operating expenses across there unless it has timber traffic in large volume?

A. I don't believe it can.

It is correct that if a line were built across the State from the Crane-Burns line to Crescent Lake, that you can't reach it from the timbered areas along in north of Crooked River. The timber in Crook and Harney and Grant Counties, in my judgment, must come out through Prineville, through Silver Creek, or through Silvies Creek as that line now runs north from (1922) Burns; then as you come west from Burns the next opening is Silver Creek, and then you have no other opening to the north.

1057

Q. In what connection did you use Mill Creek? What relation does that have to the problem?

A. Well, the question was if this timber would log—what part of this timber would naturally log onto a line up Crooked River. It would be that timber that is east of Mill Creek. The timber that is west of Mill Creek will come down McKay Creek. The timber on the Mill Creek and the Mill Creek watershed is really a small amount and will probably be cut some day by a small mill and hauled by trucks to the nearest line, wherever that might be. The timber west of Mill Creek would be carried in the log over a logging railroad down McKay Creek. (1923.) There is a little scattered timber on Bear Creek, and then there is the Maurys Mountain forest reserve in there that has, I think, a half or three-quarters of a billion feet in it. The timber that would be available for log haul would be the timber east of Mill Creek, the timber on Mark's Creek, the Upper Ochoco, the Summit Prairie district. That would take you back to the headwaters of Crooked River.

There is no timber on the South Fork of Crooked River.

Q. Now I don't know whether you heard the testimony here or not, but it has been estimated the cross-State line would take timber,

or sheep and cattle, from Crook County, Wheeler County, Grant County, in preference to existing routes. You stated, I believe, that you have cattle feeding into Prineville that you ship out over your Prineville Railroad that come for a distance of 70 miles?

1058 A. Yes, sir; as to how far sheep will drive, some of them are driven further than that.

There are grazing lands in this country largely along this ridge or this mountain, this Crooked River drainage, and so on, east—grazing lands for stock—and from there north. I don't think there is very much resource in the way of grazing lands down on the desert.

This old map, I did not say it was published in 1870; I don't know the date of that map. I said that that grant was established in 1870.

Q. (By Mr. SPENCER.) Well, I notice it designates the center of the State there, and this is not on the other maps, as a Great Sandy Desert. Have you ever been down through there?

A. I have been through part of it. I haven't been all over that district. I think our country is watered a little better than it is down there.

I know only by hearsay whether there have been any sheep or cattle lost out there on that desert. My hearsay on it is that they have lost sheep and cattle on the desert. (1924.)

As to the number of shipments of sheep or cattle we have had to California destinations, central and northern California, since this Great Northern line was extended and open for operation, we had two cars of cattle go to Klamath Falls to graze in transit for San Francisco. No sheep. There is no movement much of sheep or lambs to the West from our country. The ultimate destination, I think, of all the sheep since I have been there in Prineville has been Chicago. Sometimes they go by the Northern lines to feed in transit in the Dakotas or Northern States, but usually to feed in transit in Idaho.

This Great Northern line has been in use since about the first of the year or a little later.

1059 Mr. DEY. Some date in May of this year—two months. (1926.)

The wool goes to Portland. As to the season that we ordinarily ship cattle and sheep, we ship the feeders until along in June and then the grass cattle are just beginning now. By grass cattle I mean cattle that are fed and got fat on grass. April, May, and June would actually be the months for feeder cattle if they were going south to the San Francisco market. They might be fed in the northern part of California. Usually they are fat when they leave our country. I mean the fat cattle that are fed there; the bulk of the cattle that go out of our country are fat cattle. May, June, and July is the last of them. Then the grass fat, the cattle that are fat on grass, begin in the latter part of June or sometime in July.

(1927.) Cattle moving into the Klamath Falls Basin for fattening would move from our section along in May or June. Two cars have moved; that is all. (1928.)

Q. (By Mr. SPENCER.) What is the elevation of the Crooked River Valley as compared to the Great High Desert and the Fort Rock country?

A. I don't know as to Fort Rock, but the Crooked River Valley is, of from 600 or 700 to 1,200 and 1,500 feet below the High Desert. Our elevation at Prineville is about 2,800. You get 4,000 feet after you leave Paulina. It is 3,600 at Paulina, 5,350 at the summit between Silver Creek and the South Fork of Beaver Creek. The snow conditions at the South Fork of Beaver Creek are not bad at all.

I have had some experience in building highways over there (1929) and as to the cost of moving lava rock compared with ordinary
1060 rock, lava rock is the hardest rock you can handle. It doesn't shoot, and it is hard to drill.

We handle a little over 400 cars of cattle and sheep out of Prineville in a year. The cattle, most of it, goes West, and the sheep go East.

Redirect examination:

One reason why there has not been more traffic passing south over the Great Northern Railway is that at the present time the rate is a combination of local rates, which makes a high rate to the South. (1930.) I know of no movement on foot in that country for any revisions of rates over that connection. I know there has been considerable talk about getting a cattle rate, or a livestock rate south, so that in the event they wanted to ship to San Francisco they would have what they consider a reasonable rate. There has also been some question of getting a rate through there on permitting the movement of sheep and cattle to and from the feeding and grazing grounds. That is, at the present time their sheep leave Prineville and go south into the Cascade Mountains and graze, and then come back into Prineville in the fall, and it is getting increasingly difficult to trail those sheep, and those men have been trying to get some kind of a rate that will permit them to ship their sheep down there, for instance, to Klamath Falls or some place north of there, and take them to their grazing allotments in the forests and then come back in the winter, load them and bring them back to Prineville. (1931.) Apparently there is some dissatisfaction with the existing arrangement. (1932.)

1061 Recross-examination:

That should not involve any combination of rates with the Southern Pacific with respect to that livestock; not as far as Klamath Falls. I said Klamath Falls or some point north thereof towards Bend. That would not involve the Southern. Purely a Great Northern haul.

Redirect examination:

As to what extent shippers of our section are interested in moving cattle to northern California points: They never have, of course, shipped any cattle there, because they could not. But I don't know. I have heard that discussed back and forth. Some say they would not care for the California market; others say it would be the thing they want the most. I think that remains to be seen, once a through rate is established. (1932.)

I mentioned an effort being made to get through rates; it is a fact that that was the subject I had in mind, desirable through rates to northern California points. I do not know what the rate situation is now routing via the junction at Klamath Falls, as compared with the present or the old route through Portland.

Q. You would not know whether the rate through Portland for the additional 400 miles is more than the short route or not?

A. As a matter of fact, I had occasion to get some rate a few days ago, I don't recall what it was, and the cheapest rate we could get was via boat to Portland nd then via rail up the Deschutes Canyon. It was cheaper than coming all rail from San Francisco.

1062 W. B. TUCKER was thereupon produced as a witness and on behalf of the Prineville intervenors, having been duly sworn, testified as follows:

Direct examination:

I am agricultural agent for Crook County, headquarters at Prineville. (1933.) I have held that position since February, 1921. Immediately prior to coming to Oregon I was agricultural agent in Ada County, Idaho, from 1917 until February, 1921. My education has been along agricultural lines. I attended the University of Illinois.

With respect to the agricultural resources of Crook County: The approximate area in acres of Crook County is 2,000,000. These figures are taken from the assessor's reports, actually being 1,990,000. Of this amount there are approximately 85,188 acres of tillable land, 735,819 of land that is classified as nontillable, 134,360 acres of timberland, and 107,143 acres of patented agricultural land.

Of this patented land there is approximately 60,000 acres under irrigation at the present time. In addition to that there are several proposed projects, divided into several projects by the U. S. Reclamation Service. This is given in their 1914 report, on page 143, in which it is divided into the west side project of 20,000 acres, principally in Deschutes County; the north unit, of 100,000 acres, which is principally in Jefferson County; the south unit, of 48,000 acres, practically (1934) all in Crook County; the east side unit of 35,000 acres, portions of which are in Deschutes, Jefferson, and Crook Counties; making a total of approximately 203,000 acres that have

been set aside for future irrigation development. That is segregated under Government segregations. Not patented at this time.

1063 This 735,819 acres of nontillable land is used chiefly for grazing purposes. It is very good grazing land on the whole, ample water for the most of it, and furnishes very good grass for the stock that are pastured and run on it.

Q. This Deschutes project, how is that served, or how is that affected by the proposed Prineville-Burns Railway?

A. The proposed road would practically bisect this entire area. In other words, equal agricultural land would be on either side of this proposed road.

Bend is on the extreme south of the agricultural land of central Oregon. Madras is practically on the north side of (1935) this proposed and already developed land.

A large portion of the agricultural land of Crook County is devoted to the production of forage crops, alfalfa being the chief one.

You will notice, those of you who have this report, that there are two estimates. The first column, I should say, is an estimate that I have made from circular letters and personal inquiries among the farmers of the county. The estimate on the second column is a report from the U. S. Bureau of Agricultural Economics, 1926. There is some wide variance between those, which I think I can explain.

The tonnage in Crook County of alfalfa is set at three tons on the average. This figure was arrived at by a forage cost survey conducted by the Oregon Experiment Station in 1926 and '27. There are other hay crops such as wild grass, meadow grass, and tame mixed pastures that are sometimes harvested for hay, as well as rye crops, and some other grain crops, making the total approximately 17,000 acres of hay land producing 2.1 tons per acre.

We have approximately 9,000 acres of spring wheat, yielding about 35 bushels to the acre, 800 acres of winter wheat with

1064 a yield of 20 bushels per acre. (1936.) All of the agricultural land is in the central and western portions of the country—farm land, I should say.

The result arrived at by the U. S. Bureau of Agricultural Economics is not as thorough as the methods which I took, and are probably not as accurate. For example, the way those figures were arrived at was the enlisting of reporters in the county, who periodically send reports to him in Portland, and in many instances there were only two or three such reporters in the county. The potato acreage he lists in 1926 as 250 acres. I can cite two men in Crook County that had an acreage exceeding this total for the county that he has reported.

Beef cattle is the leading livestock industry in the county. The figures giving the number of cattle are shown in this report. A large per cent of beef cattle are fed in the vicinity of Prineville.

They are grazed in the timbered areas that have been mentioned in the previous reports and on this nontillable land. Cattle are fattened and marketed as grass fat and feed-lot fat cattle. (1937.)

The sheep population is estimated on the report, and the bulk of the lamb crop is marketed as feeder lambs—feeder and breeding stock. There are very few feeding operations for feeding and fattening lambs in central Oregon at the present time.

The dairy cattle situation has increased materially in the last 7 years and is still on the increase. We have dairy cattle operating a distance of 70 miles from Prineville, and cream is being shipped by stage to Prineville, paying a charge for trucking it to Prineville equal to that of the freight or the express from Prineville to Portland. In spite of that heavy cost, dairying is still on the increase.

1065 The figures show the amount of butterfat that is produced in the county at the present time. Practically all of the butterfat is marketed in Portland, outside of the local consumption in a few of the surrounding towns.

In my opinion better railroad facilities would help the local situation out, stimulating more dairy development in the Crooked River section, as well as furnishing competitive markets. (1938.)

I have not investigated the California market in reference to central and eastern Oregon, but I would think that it is more a competitive market to stabilize prices rather than an actual market. There would still be a considerable quantity move in other directions in any event.

As to how the products raised in the eastern part of the county, the southern part of Wheeler County and western part of Grant County would be affected by this proposed Prineville-Burns route: It would change the agricultural production considerably, in that there would be more diversified crops produced in that district than are being produced now. It is impossible to haul grain great distances, and if such a railroad were constructed it would be possible to produce those crops that are usually grown tributary to a railroad.

As to my experience with figures and estimates of the United States Bureau of Agricultural Economics in other instances than just these that I cite (1939), I think as a rule they are under rather than overestimates.

I have not made any estimate of the amount of agricultural tonnage that might be expected to move over a line constructed east and west through the State. I am not familiar with the estimate made by Mr. W. L. Teutsch. With reference to Prineville, the area of agricultural land that I say would be changed to produce other

1066 crops than are now being produced is principally east of Prineville, that section not served by a railroad at the present time. That would be mainly along the course of the Crooked River section. As to what kinds of crops or products I think would be produced there in the event of railroad construction: All of the grain

crops that are now being produced in the vicinity of Prineville; that would include wheat, oats, barley and rye. Clover seeds would be produced. Alfalfa is now being produced in that section as a hay crop. These products along the Crooked River there move into Prineville something over 70 miles. (1940.)

Cross-examination:

At the bottom of page 3 of my exhibit I give butterfat produced in 1922 as 47,000 pounds, and in 1927 as 1,050,000 pounds. That is correct as near as I am able to determine. Crook County is estimated to be reflected by those figures. Redmond is in Deschutes County. They raise all this butterfat in the vicinity of Prineville, both north and south and east as far as Paulina. There are approximately 30,000 acres of irrigated land in the watershed of the Crooked River from Prineville to Paulina. The water rights along there have been adjudicated. As to whether that is the capacity of Crooked river, there are no storage rights provided. It is simply direct flow of Crooked River and its tributaries. (1941.) I do not know the capacity of the run-off of that stream for reservoir purposes. The valley is fertile down to Prineville. West of Prineville the cultivated area extends to the county line. As to the inspiration that jumped up that dairy production so rapidly from 1922 to 1927, it was the only thing that was paying good return. I know where
1067 we got our dairy cows from, we imported most of them from the Willamette Valley. We ship our product to Portland, except such as is made by the citizens in those cities and used locally. Some of the product from the Bald Butte section goes to Bend (1924.)

As to whether I am familiar with this desert country that is referred to in paragraph V of the petition of intervention of the Prineville people, I have been through that territory several times.

Q. (By Mr. SPENCER.) It is described in the petition here as a barren waste, with but very scant possibilities of any agricultural development, and without local tonnage. What do (1943) you know about its condition?

A. About the only available use that I know that it is being put to at the present time is a little spring grazing before the water hole drys up.

Mr. SPENCER. I think that is all.

Comr. MCMANAMY. Mr. Tucker, for my information, will you tell me something about agricultural agents—that is, by whom employed, and their duties in general?

A. The agricultural agent is employed by the U. S. Department of Agriculture, the State agriculture college and the county cooperating, each contributing funds toward supporting that work. His duty is to work with all agriculturally inclined people in the county in any way to increase the agricultural condition. There are agents only in those counties which have petitioned for an agent.

(The statement referred to by the witness was thereupon received in evidence, marked "Intervener's Exhibit No. 30, Witness Tucker."

(1944.)

1068 Exam. ROGERS. Mr. Tucker, are you familiar with the proposed location of the cross-State line as proposed by the public service commission?

Q. Only in a general way. I have never followed the route. I have crossed it going north and south, and been along a portion of the way east and west.

Exam. ROGERS. I notice that Mr. Teutsch, in his Exhibit 1, in estimating the present agricultural tonnage available from four counties—that is on page 13 of Exhibit 1—does not include any of several of the commodities that you have on your Exhibit 30. Would you think that any of the commodities which you have shown on your exhibit would be tributary to the cross-State line as proposed by the Oregon commission?

A. I do not. It wouldn't be available for a road that far distant. It moves now over the Deschutes road to Portland.

As to what I think of what Mr. Teutsch has shown there as sheep, sheep for breeding, clover seed, (1945) and wool, my own opinion is that there would be very few sheep from Crook County moving over that road as proposed by the commission. I do not think there would be any more from Deschutes County. Wheeler County would be clearly out of line, no physical connections whatever, and it would be much easier to transport their commodities to the Condon branch of the Union Pacific than go to the south. My judgment as to the clover seed is, clover seed is a concentrated crop, and might be transported in any direction. However, the quantity is so small that it would be insignificant. Respecting wool, the natural movement of wool is to Portland.

Mr. ELLIS. You will recall, Mr. Examiner, that Mr. Teutsch eliminated the wool from that estimate entirely during his testimony.

(1946.)

1069 As to what we do with the 54,000 tons a year of alfalfa, we feed it to sheep and cattle, dairy cattle and feed cattle. Very little of it is shipped from Crook County. We do not sell any of it over in Coos Bay or Tillamook because they won't pay us enough to make a profit on it. We have not reached the alfalfa possibilities there with 54,000 tons; we could double that production and have 54,000 tons for sale if there was a demand for it.

(1947.)

1070 Redirect examination:

The principal market for our sheep is in Idaho and Washington. (1947.) The Idaho market compares fairly favorably with that in Washington. We ship more to Idaho than to Washington. We do not ship any sheep to eastern markets. We ship perhaps one or two cars of lambs a season. They are practically all marketed as feeder lambs. And their market is in Idaho and Washington.

Idaho and Washington produce a lot of sheep of their own, but they buy the central Oregon lambs and feed them out and then ship them on east. On the sheep that are shipped to Idaho, I think they should move east from these counties of Deschutes, Crook, Jefferson, and Wheeler, if it were possible to get them to a railroad without a long drive. They, of course, are going to be loaded on the nearest railroad available.

Q. If they could move from Prineville over the city of Prineville Railway and then through Bend with a shorter distance over the cross-State line than via the Deschutes line and the main line of the Oregon-Washington Railroad and Navigation (1948) Company, is there any reason that you know of why they wouldn't follow the cross-State line?

A. They probably would if that road was constructed to Bend.

V. V. HARPHAM was thereupon called as a witness on behalf of the Prineville intervenors, and, having first been duly sworn, testified as follows:

Direct examination:

I reside at Prineville. At present I am supervisor of the Ochoco National Forest. I have been on the Ochoco as supervisor 11
1071 years; since October 15, 1917, to be exact. (1949.) I entered the Forest Service as a fireguard in 1907. I have practically been in the work since 1907 with the exception of about two years, two seasons.

I think I am familiar with the timber resources of Crook County and adjoining counties that come under our jurisdiction. The figures of the forest resources of the Ochoco National Forest, and particularly Crook County, are given on page 4 of this exhibit.

Mr. BECHTELL. Well, on page 4 of your exhibit, Mr. Harpham, the statements 11, 12, 13, 14, and 15, estimating timber in those counties, apply only to timber actually in the forest reserve, does it?

A. That is my understanding. Government timber within the forest. Then in addition to that each of those counties have considerable areas of privately owned timber.

The Forest Service figures that approximately 3,050,000,000 feet could be consistently milled at Prineville coming from the forest proper, and about 2,050,000,000 could also be milled there that would come from adjoining timberlands. Privately owned timberlands contiguous with the forest. That would be approximately 6,000,000,000 feet in all. And Prineville, or the approximate location, would be the logical place for that to be handled. That is governed by the watershed and the lay of the land. The timber easterly from the watershed division line between Ochoco and the north fork of Crooked River could be taken southerly to Crooked River proper if there were railroads (1951) down the river. But it also can be pulled to Prineville by extension of the railroad. That is, it would be either at Prineville or some point on this railway between Prineville and Burns, and not elsewhere.

I am very well acquainted with the country to the south of the Crooked River territory. As to whether I consider it possible that this timber could be moved from a railroad south of the territory of the Crooked River territory: The Government has
1072 never figured it that way. I know, of course, there is a line from Burns to Seneca. I might modify my statement slightly and state that timber from what we call the Snow Mountain division of the forest, that is the unit near Burns, could be taken to any railroad that might pass westerly from Burns. Of course, whether a railroad goes from Burns to Crane directly into Odell or Bend, or whether it would come by way of Prineville to a connection, the route from Burns westerly for 25 or 30 miles would very likely be pretty much the same course (1952), and that Snow Mountain timber could move south to that railroad wherever it might be.

Q. Well, it could move to Burns just as well at present, with the present railroad, could it not, as to a line that came up through it north?

A. A line would have to be built from Burns, of course.

Q. But, for instance, the line from Crane to Odell, would that serve it any better than it might be served now with the present extension to Burns coming down——

A. Well, spur lines, of course, would have to be built from the main line that would extend directly from Crane or Burns to Odell northerly into the Snow Mountain district.

Q. Yes; but I mean across here [indicating on map]. A line from Crane to Odell across here wouldn't help this that you are speaking about?

A. Not without branch lines.

Q. But there is already a line to Burns. Wouldn't that serve better than this would down here?

A. Yes; that line to the south wouldn't help. I have been assuming that a road, no matter where its western terminal might be, would take off from Burns rather than from Crane. (1953.)
1073 Q. Then this extension north into Seneca—that is here [indicating on map]—in order to get this timber in what you call the Snow Mountain territory, which is in here, it couldn't go directly across from Seneca, but you would have to come back in these connecting valleys and then go north again?

A. That is the way the Government figures their railroads, I believe.

This line from Burns to Prineville—this Snow Mountain timber would be more available to it than it would be down the Seneca route.

I am familiar with the privately owned timber. There is a unit of privately owned timber, also, in connection with the Government-owned timber, on what is known as the McKay watershed. That is a desirable milling operation. As to how much timber that contains: We have no detailed estimates, but comparing that with timber that we do have estimates for I should judge that the volume

would be better than two billion. (1954.) And that might be ready for immediate operations if transportation were available and other conditions were favorable.

There is also another unit, privately owned, what is known as the Ochoco timber holdings, that are also ready for development. The Ochoco Timber Company have approximately 50,000 acres, I believe, on the Ochoco watershed outside of the forest boundary. Those figures are approximate, but not very far off. Their other holdings are within the forest boundary. They are in the same unit, though. That would be available for a very immediate operation in case conditions were favorable due to transportation. (1955.)

It is my understanding that the present policy of the Government would be to require milling in Crook County, but not at any designated place within the county. The county would be about as small a unit as they would attempt to define.

1074 "Y. P." signifies yellow pine; "D. F.," Douglas fir; "W. L.," western larch. The other species would consist of white fir, lodgepole pine, and others.

The forest reserves in our jurisdiction are extensively used for grazing.

Those figures of the amounts of livestock in my exhibit are for the calendar year 1927.

With reference to this policy to mill in the county in which is located the timber, as to whether that would mean that that we would have to get some sort of facility into every one of these counties where the timber is located: I can't say whether that policy would apply to every county or not. I understand that the policy of the Forest (1956) Service so far as Crook County is concerned would be to require milling in Crook County. That is unwritten information, but I think it is reliable. The Washington office of the Forest Service have those rulings to pass on. That was handed to me by mouth from a superior officer. I believe, if I may disgress a moment, that that policy so far as Crook County is concerned would be applied in this case, because of past reverses of this particular town. There have been some disasters there that they feel justify that requirement. (1957.)

Those boundaries have changed very little in the forest reserve in the last few years so far as the Ochoco is concerned.

(The map, showing the forest reserve timber and outlining the privately owned timber adjoining, and also giving the watersheds through the forest reserve, showing the Prineville-Crooked River country and that to the north, was thereupon received in evidence marked "Intervener's Exhibit No. 31, Witness Harpham.")

On the map just referred to, marked Exhibit 31, you are correct in understanding that the green portion would move toward the Crooked River watershed and through Prineville.

Q. Is the green portion the 6,000,000,000 feet that you suggested would be tributary to Prineville for milling?

1075 A. That would include the 4,000,000,000 within the forest, and within the boundaries of the purple line. The purple line boundary that I have shown indicates the approximate boundary of the contiguous privately owned timberland that could be consistently logged into Prineville. To include the entire 6,000,000,000 you would include not only the green area but the area within the purple boundary. (1960.)

The Prineville operation—which could not be handled from a Prineville operation, would necessarily have to be handled by small mills, probably, and the timber taken out—it might go some other way. Part of it would not move out through Burns and Seneca. It would have to be either logged down the John Day River, driven down that stream, or some other means of logging devised to care for it. A very small portion of it might be reached by logging railroads which would cross the summit, representing the summit dividing the John Day water shed from the Crooked River water shed. I would not say that none of the red or green area on the easterly end nearer the branch extending north from Burns would be milled at Burns and transported over the Burns-Seneca line.

The Snow Mountain timber with reference to the (1961) colored area on this map is represented by this southernmost unit of the forest. It is south from the most extreme colored portion on Exhibit 31, approximately 7 miles. I stated it as my opinion that the Snow Mountain area would be milled logically at Burns.

In the event the cross-State road suggested by the Prineville interests were not constructed, all of the 6,000,000,000 feet could be handled by a Prineville operation. The longest logging road would need to be approximately 75 miles long to handle that timber into Prineville.

1076 Q. And how long would the longest logging road out of Burns (1962) have to be to reach the timber on the easterly end of the Ochoco Forest not now served by the line from Burns to Seneca?

A. You mean how much of a mileage extension would have to be made to the present Seneca line?

Q. Either from the present Seneca line or from Burns to reach the easterly portion of the Ochoco timber that you haven't included in your estimate as going to Prineville?

A. I don't figure that it would be practical to log any of this Ochoco territory into Burns that is shown as not logical for Prineville.

Mr. ELLIS. Well, the portion that you would log to the south, and that you haven't included in your area as going to Prineville—in your estimate as going to Prineville?

A. It would take approximately 50 miles of logging railroad from Burns to serve the furthermost portion of the Snow Mountain unit. (1963.)

Cross-examination:

I said there were approximately 2,050,000,000 feet in the Snow unit there.

The red line running through the map indicates the summit of the mountain where the ridge breaks.

Q. And on the north side you say, of course, that it isn't practical to haul it over here to Prineville? Now, is there a large area tributary to the John Day on the north side over there?

A. It is comparatively small within the forest. There are several thousand acres of privately owned adjoining it on the north.

1077 Q. And some of these railroads from the other side are headed toward that? Where are the people that are starting their (1964) mill—the Kinsue Lumber Company, about 25 or 30 miles south from the end of the Condon Branch, that are just starting in operation? That is private timber, isn't it?

A. That wouldn't affect this. We figure it wouldn't affect that, because of the deep, rather deep chasm of the John Day River Valley.

Mr. ELLIS. Just a question as to the pink area on the south side of the map, where would that logically move to?

A. That is limited in volume, and would likely be largely used by local people.

It could be logged by trucks on the Bear Creek Road to the Crooked River Highway. Logically it should move to the south or west.

There are approximately 25,000 acres in what is labeled pink in this lower colored diagram. I am having to (1965) guess. That would be perhaps 150,000,000 feet or thereabouts down in that country. That is pretty low—not enough to speak of. (1966.)

PORTLAND, ORE., *Aug. 14, 1928.*

I. M. MILLS was thereupon produced as a witness on behalf of the Prineville intervenors, and, having first been duly sworn, testified as follows:

Direct examination:

I reside at Paulina, Crook County, Oregon. I am engaged in the stock business. My lower ranch, that I call my home ranch, is located 12 miles east of Paulina, about 58 miles east of Prineville, on Beaver Creek. (1967.) I would think it was close to 100 miles from Burns.

I have holdings right both in Grant and Harney and Crook County. I would think my home ranch was 25 miles from the Grant County line.

1078 The boys and me, we do our business together—I have two boys, and we have about 20,000 acres. We cultivate part of our land. I have about 500 acres of land that I raise meadow, oats, timothy, red-top, and such forage for stock. Then I raise on both

of my ranches, wheat, oats, and barley, also what potatoes we use, and garden stuff. I could cultivate a great deal more than I do, and I don't cultivate this land year after year. I just raise enough from one year, 2,000 or 3,000 bushels, maybe 4,000 some years, that's all the grain that I have use for, because (1968) we have no market for grain in that part of the county, as we have no transportation, therefore, I don't, maybe, thresh the next year at all, as I have plenty of grain. We raise it practically for our own use. If I had transportation I could raise thousands of bushels of grain more. I have threshed as high as 80 and 90 bushels to the acre there in oats. I have threshed 40 bushels of wheat. There are other stockmen and farmers there that have the same experiences.

I could cultivate a good many thousand acres on my holdings that I just use for grazing purposes, if I had transportation to get this grain out of the country. We can't haul it. Everything that I haul from Prineville costs me a cent a pound by trucking.

I built a house there—I think maybe I completed that in '16, which was rather an expensive house for a ranch house (1969), $16,000 to $20,000. I hauled the material there with a 6-horse team from Redmond. Mr. Lister has built a very modern house there as well, which cost him a great deal of money; I don't know how much.

My holdings and other holdings around me at my other house have been run over several different times in the last 3 or 4 or 5 years by geologists, and this year there was a man in there
1079 representing the Standard Oil Company, having credentials, who has leases on all my holdings at my upper ranch, and several geologists have told me that the lime and lime rock were millions upon millions of tons if we only had some transportation, because they claim it is a cement rock of a first class product. Mr. Conley representing the Standard Oil Company this year was one of those men. (1970.)

Professor Packard, of the University of Oregon, told me there was great possibilities there for cement and lime, millions and millions of tons, and he has told me also, that there wasn't—this lime is just filled with marine fossils; in fact, they had a bunch of boys from the Oregon University there, and I don't know how many hundred pounds or maybe thousand pounds of them fossils that they have taken out of that country, and he told me that that was the only lime in the State of Oregon that there was a fossil in.

Geologists have told me that the marine fossils is also one of the surface indications that have interested oil geologists; but I know nothing about it. We have every surface indication of oil, but what there is underneath I don't know. It never has been prospected.

I am familiar with the country to the south of (1971) me to practically the southern border of the State. I came to Crook County in '85, and have rode that desert for the last 43 years. I am pretty well familiar with all parts of it.

Assuming that a railroad were built from Crane to Odell, as proposed in this proceeding it would be of no benefit to the portion of

the country where I live at all. I would still continue to drive my stock to Prineville, if I were coming west, and I would still
1080 continue to drive my stock to Burns if I was going east. That is about 68 miles in one direction and less than 100 miles in the other; I think we call it 150 miles from Burns to Prineville. My upper ranch is practically half way, and there is where my stock generally originates from when I start on my drive. At my lower place I raise feed, but my upper place when I start my stock to the market they start from the upper (1972) ranch, both sheep and cattle, about 75 miles.

Exam. ROGERS. But how close would a railroad have to come to your place before it would be of benefit to you?

A. Well, of course, I could go if I had a railroad within 25 miles there; I got good water 15 or 20 miles; and I guess if we had a road that I could truck grain, it would be rather expensive. You take where I live our roads there are country roads. After the middle of December unless it freezes up very hard we can't get out.

Exam. ROGERS. Well, what I had in mind, of course, out in this great open country it is practically impossible to build a railroad on everybody's place.

Oh, certainly. (1973.)

The road would be of benefit to me if I can get any distance closer than it is, if I can get the facilities so that I can drive my stock there, now, it would be a benefit if I can't get water I can't go that way.

Q. (By Mr. BECHTELL.) Is not a considerable portion of Grant County that would be served by this road from Burns to Prineville?

A. I would think that everything west of Izee would be served by a road, east and west road, because there would be Izee cattle, a great many of them, if they came west there would ship from Prineville, a great many times, but if they are going east now they are loaded to Bear Valley, over to this other little road; they were loaded there last year.

There isn't much chance for Wheeler County to come in if a
1081 railroad were put through the eastern part of Wheeler County, because they have a mountain to come over there; they would have to go to Prineville.

Q. Do you know of any great amount of local tonnage that would be served on this country that is to be traversed by the (1974) road from Crane to Odell through the High Desert?

A. I wouldn't know where they could get it. I don't know where they can get tonnage across that desert.

There are some little valleys there that would have agriculture, providing they had water to irrigate it, and that is out of the question.

The distance from my ranch to Seneca is 75 miles, over two mountains. It is practical to drive stock in that direction; you can drive stock in any direction, providing you can get water. I have drove to Pendleton for years, I have drove to The Dalles, so it is practical,

but I supposed we would be getting in an age where (1975) we don't have to drive them across the continent.

Q. Well, would you have in mind in figuring the mileage that you would think was reasonably practical in driving stock, so you can get them there in a fat condition?

A. Well, I will tell you, it's just conditions; if you had the conditions—you can't drive them without feed and water. You can go a long way with cattle or sheep if you have feed and water, so they can get plenty of feed and plenty of water.

Cross-examination:

I raise wheat and oats up here. I can raise wheat and oats on both ranches, which I have done. And barley and alfalfa. I irrigate my lower place, and I don't irrigate any of my grain. I irrigate my meadows, but I don't irrigate any of my grain, because I have a sub-
irrigation system that there's quite a lot of my grain subirri-
1082 gated. (1976.) I irrigate my meadows, and of course it don't quite get down into my grain and it subs through underneath. That is what I mean by subirrigated. I raise 40 bushels of wheat to the acre with only this subirrigation. I raise beef for the market. I have just enough dairy cows for my own use. I run one good band of sheep. I run about 1,000 or 1,200 cattle and about 1,550 sheep. (1977.)

As to how far I am from the highway which extends east from Prineville and that goes over to the Canyon City country, I am, from my lower place, I judge it is 68 miles, because Prineville is the closest that I can get. I have never discovered any highway along that ridge that comes out to Paulina there. There is a highway that comes up about to Bear Creek; I would judge it is 20 miles. They call it a highway now, but there was no construction done on it, you understand, and you had better get your life insured before you drive very fast over it. There is a little of everything there. As to whether there are any highways through the big High Desert, I have understood at the present time that they have a highway being built from Burns to Bend, but I haven't been over it—yes, now I will take that back. I shipped a lot of mules to Grand Island, Nebraska, and I came back from Burns to Bend over portions of that highway.

Q. That is not down in the center of the big High Desert? (1978.)

A. Yes, sir. I haven't discovered any roads down there. Now I used to travel a road when I drove stock to California; I used to go by Wagontire: they called it a road. I used to travel it by Albert Lake, down by Chewaucan, the crossing of Chewaucan, up Crooked Creek and down to Lakeview. We can travel any kind of a road in that country; we are used to it. We are not used to traveling highways; we haven't got them.

I did raise a crop of mules. I uses horses, not machinery,
1083 on the farm. When we were ranging over the High Desert we would make a camp one place to-day and another place to-

morrow. We had no headquarters. We worked the country as we went. I know the Christmas Lake Valley, and Fort Rock in the west end of it. As to what I would say of that valley as a prospect for tonnage and crop production, when I rode that country you understand there was (1979) no settlements in there. I can't remember of being in the Fort Rock country since about 20 years ago, and I came through there this last summer, this last spring. In fact, this summer I went down to Lakeview, interested with some of the others in trying to revive the old Oregon Cattlegrowers Association, and I went down through there and the crops looked very poor to me, with the exception of one man had a little piece of alfalfa, and I understood that he was pumping water for it. I didn't stop there. Nothing else looked like a crop to me.

Q. (By Mr. SPENCER.) Well, is it a country that is promising at all as a crop producer?

A. I know the High Desert so well, I have rode it all times in the year, and there is very few times when you get on the High Desert but what you might have a frost, or maybe you might have ice, if you left any water in your buckets, or anything, you might find ice in them. You would not need to have any ice; you could get it right there as a general thing in the morning. That is in the summer months. As to whether that is true in the Christmas Valley, I haven't been in the Christmas Lake Valley to pay any attention to that, just to (1980) be honest about it, but in the High Desert part of it, why, I know it thoroughly.

Q. What effect does water and timber have on climatic conditions? That is to say, you take the same elevation where there is water and vegetation and timber, or it is sheltered, how does that compare with desert open country, where——

1084 A. You can take now, for instance, there is a range of mountains right north of my home ranch as well as east of my upper ranch; we have rainstorms come right around that mountain and never touch the ranch, but the condition is that it keeps up the moisture, the soil has more moisture in it and we will get portions of rain where you don't get any on the desert.

As to what effect on the temperature in an exposed open country where there is no timber and no water as compared with a country of the same elevation where there is timber and water, as to freezing, and crops, it makes a big difference, because, I will give you a little illustration of a gentleman right there up in the edge of the timber, right there at my upper place and my lower place as well. The people that has places there is raising vegetables and things more tender than I can raise away from the timber; right in the edge of it they can raise vegetables and things that I can't raise. As to what the altitude is just (1981) at them places I could not say, but it is just practically the same, because the places that I have reference to are only four miles from my place, but the effect that the timber has on the climatic conditions is the cause. Water has some effect too. My idea is that the exposed desert area suffers much

more from cold and frost and ice than the country where there is timber and water.

In recent years I am not as familiar with the Christmas Lake Valley and Fork Rock; not as much as I am still farther east of there. There has not been any geological change there in central Oregon the last 20 years; none whatever.

I have camped in Christmas Lake Valley. The only difference there that I can see, from what it was 20 years ago, it is fenced
1085 up a little more than it was when I was there. (1982.) The way it was at that time, we would just ride in there one night, you understand, and work cattle and work horses; we would go some place else the next, and it is just the same all over that country; you have ice and you have frost. On my last trip across it I saw some fencing; more so than ever before I went through there this last summer; but there wasn't very much in Christmas Lake Valley this summer. There is some rye grass there, and quite a lot of alkali. That might be tonnage; I don't know. There is some alkali in that valley. There is a whole lot of it in the east end of it. The water is impregnated with alkali; in the east half of that valley. Livestock accustomed to the range don't (1983) take kindly to going up and drinking out of water troughs. They are not used to the watering troughs.

I do not think it is practical to sink wells in a country like the Fort Rock and Christmas Lake Valley and irrigate it and reclaim it with wells, for the simple reason that I have known of two or three wells on the desert in different places, that is wells that have been put down—not exactly they would be on the desert, not on the high. Not on the High Desert, that has went down 300 or 400 feet, and one in particular, Mr. Brennan has one there that he pumps water, or tries to pump water, for a band of sheep, and he has made it a failure, because his machinery gets out of whack, such a hard lift and one thing and another, and it is just simply a failure. That is north of the High Desert, but it is a desert just the same.

Comr. McMANAMY. Where did you get water for your stock when you were ranging them on the High Desert?

A. Now you understand snow comes there in the winter and (1984) there are little lakes, and when the snow melts it fills up those
1086 little lakes and after while when the weather gets hot them lakes dries up. I was trying to think of the lake there; I can't think of it just at the present time, the name of it. That don't generally go dry, but those little lakes, they scatter out on the desert and when they go dry we have to go out there and gather them and take them off of them, excepting the horses. They go a long ways for water.

Redirect examination:

I would include in the High Desert, south of Crooked River, towards Wagontire, towards Alkali Lake, around Alkali Lake, around Abert Lake, west, all through that country towards Bend.

I would not include the area around the Double O Ranch; that is not High Desert. Going west from the Double O Ranch you would strike the High Desert there at Glass Buttes, and a good long ways before you get to Glass Buttes. That is some distance west of the Double O Ranch. (1985.) You can strike a desert any place that you leave the Double O Ranch and go towards the Glass Buttes. You take the Wagontire mountain area, we have some springs on the Wagontire Mountain that runs out a little ways in the desert and sinks. There is one man there that I know of just the other side of Wagontire that has a well, not very far away from Wagontire. There is another one still farther west. Now there might be more, but I don't know of only them two. There is another one also now, but it has very little water; they don't water very many stock, because he runs his stock in the Maury Mountain area, and that is on a road between, about half way between Bend and Burns.

As to how far the well in the Wagontire section is west of the Double O Ranch, I could not tell you the area in miles, but it is a good long ways. The farmers in that area sometimes raise some farm crops in there when we have a very wet season. But
1087 most of them people has left that country; it has been settled up thickly. (1986.) The reason they don't raise them is not that they have no transportation to get them out. They can't raise them in there, because they haven't got the soil, nor they haven't got the moisture. They can't raise them. I can raise them but I don't because I have no transportation. I can raise them, but do. But I don't raise only just exactly what I have use for myself. They would not be limited in the same way that I am. Their soil conditions is altogether different. I have seen farming done in that area down there. I have never done it, thank the Lord.

As to water conditions down around Alkali Lake, I have drove stock from Abert Lake—from Wagontire to Alkali Lake, if I am not greatly mistaken it is 30 miles. There was no water at the time that I drove stock through there from Wagontire to Alkali Lake. (1987.) You can dig a well almost anywhere around Alkali Lake with a post hole digger. You can right around the edge of the lake in about 20 minutes. I don't doubt that at all. But if you had something else besides a post hole digger. You can't go through that lava very well with a post hole digger. As to whether water can be found with 12 or 15 feet anywhere around Alkali Lake, right around Alkali Lake, if the lake don't cover it, I have no doubt but what you can. But after you get away from the edge of the lake you get into lava and you get into rock. You can't do no business with a post hole digger there.

I did not include in the High Desert area that I speak of the territory around Silver Lake and Summer Lake in northern Lake County. Away from Summer Lake it is a desert area. You take right there at Summer Lake, it is a very nice part of Oregon. At Silver Lake they have got a different soil. Everything is different in Silver Lake.

1088 As to whether I know anything about the Fort Rock Valley (1988), I have been through there and I have rode it years ago and I was through there this last year. I have seen men farming there; that is as far as I know about the conditions; and I have seen the crop this year that they were trying to raise. I would include that in my description of High Desert, the farming part of it; not as bad as some of the others. It is really a wee bit better. It freezes quite a lot around the Fort Rock country. Yes, it used to years ago when I used to camp up there. I just came through there this year in an automobile. I don't think the conditions could have changed. I don't see why it would change.

Q. Do you mean to say that the frost conditions there now are such that crops cannot be raised successfully?

A. I think for the crops that is there—I saw all kinds of crops there this year that was frosted, just this year when I came through. The crops was frosted when I came through from Lakeview. (1989.) As to when I came through there, I was just trying to study about the dates. I can't just exactly study. It seems to me as though it was in June. I would not be positive. I saw some crops such as those described by Mr. Nolte in the record; there was one piece of alfalfa I saw. I have an idea you got it out of the same piece. [Referring to samples produced by Mr. Nolte.] That is the only alfalfa I saw in Fort Rock Valley. I have an idea it was just about like that.

I do not know the people that live at the Ernst ranch and the ranch farmed by H. M. Parks. I saw more than one ranch. I went right square through the valley, and I noticed this one piece that the alfalfa was growing in, and I think that must have come off of that ranch.

1089 Q. Mr. Nolte, of Lakeview, has introduced some pictures as exhibits in this record, and I have three of them here; did you see anything that looked like that?

A. Well now, I didn't take no particular notice of that. I was looking and taking in the condition of the (1990) country as it was at the present time when I went through it, and as it was when I used to ride the range. I didn't find anything that was promising in the Fort Rock Valley. I don't know as I found anything that looked like the pictures you are showing me. What do you call them? Are them potatoes? I might have saw some of them potatoes; I might have. What time was that picture taken?

Q. About 10 days ago.

A. Ten days ago. Well, them was very small when I saw them. They might have been frosted two or three times since then and still be that high. (1991.)

In ranging livestock on the High Desert, there was no difficulty at all when we had water; no difficulty when they had water for them to graze on. In the springtime we had water. Them little lakes fills up and we have water for the stock. It is very good; the grass is very good at that time. Winter times there is some sheep and some

horses ranged on that desert, but they haul corn in there. But they don't do that as much as they used to do it.

In raising livestock in this country, or any other country, it is certainly essential to have not only water but a feed supply for winter months available.

Q. And isn't it true that you could utilize even the High Desert to better advantage if you had some means of transportation to get in your feed when the first heavy snow comes?

A. Oh, yes. You can take—if I was on the High Desert and I was trying to skim through, like some of them Basques does,
1090 they don't have a foot, they haven't got a dollar invested in any real estate; they are just trying to accumulate a little—(1992) a lot of Basques and others as well; white men, some of them, in the same class. They can go out there on the desert and if they had transportation to haul some feed in there and let their sheep eat snow as long as they had snow, why, they can get through. They eat snow to take the place of water, and in that way when you would have to feed; but then your stock don't do as well as it would where you had the running water for them, to feed them their hay and had running water for them; not near as good. Even on the worst part of High Desert, or the territory I call a High Desert, there is something there that could be better utilized if they had better transportation facilities. Any portion of the country, I don't care where it is, if you can utilize it at all you can use or utilize it more with transportation than you can without it. Certainly you can.

In that central Oregon section you will find little draws where the sagebrush will get (1993) pretty good size. You will find other areas that the soil is mixed up with fine gravel and things, that the sagebrush is not very high. Not large areas where the sagebrush gets large, not large areas but just small draws, as it is all over central Oregon.

Q. Is the fact that you find large sagebrush an indication of fertile soil?

A. Yes, if you had moisture. Yes, if you have moisture for it. It don't indicate nothing if you haven't got the moisture. If they have water to apply to that soil it will produce.

Q. (By Mr. McCulloch.) Mr. Mills, how far would this line that you are advocating from Burns to Prineville have to be away from your branch there east of Paulina before you would say it would be of any benefit to you?

1091 A. Well, as I have stated before, I am not advocating any railroad line. I am just here for the purpose of explaining the conditions in my immediate neighborhood and the High Desert conditions. (1994.) I am just telling you the condition as it exists in that area. I don't know where the line would be, where it would be located; and, to be honest with you, gentlemen, I don't expect to ever see the railroad up there in my time. I am too old. I am here as a witness in the interest of the construction of a line,

but I don't know where the railroad would run. I am interested in transportation.

Q. How close to your ranch would that transportation have to be, to be of any benefit to you?

A. Any place less than Burns, or any area less than Prineville, providing I have a way of getting to it.

My lower place is about 68 miles from Prineville; and my upper ranch from Burns, it is about 75 miles from Prineville, or to Burns, and there is where my stock originates; and about the same to Prineville, or 80 miles. If a railroad came within 68 or 75 miles of my ranch it would not (1995) be a benefit to it if I can't get to it, because I can go to Burns or I can go to Prineville. I mean when I say if I can't get to it, that there might be conditions where I can't drive my stock to it, maybe, because there is no water or no feed, or some such conditions as that, you understand.

Q. I say, how close would a railroad have to be to your ranch to be of any benefit to you, as conditions are now?

A. At any distance closer than it would be to Prineville or to Burns, providing the condition was so, if it was so located that I could get to it. I can't drive stock over a desert, gentlemen. I could go in the spring of the year, but I don't sell nothing in the spring of the year. My stuff goes out in the fall. (1996.)

1092 Q. Well, if this line of railroad from Burns to Prineville and 68 or 70 miles south of your ranch would that benefit you?

A. No, it wouldn't, because I can go to Prineville or I can go to Burns.

Q. If it ran 50 miles south of your ranch, would it do you any good?

A. If it was conditioned so I can get to it south. It wouldn't be no benefit, because I can't drive my stock to it. It would benefit providing, you understand, it was located so that I can get my stock to it. I have to have water, gentlemen, and I have to have feed. They won't feed on high desert air.

As to whether I could drive my stock south at all from my ranches under present conditions and get water and feed, get them to a railroad, I drive my lambs to Burns every year, but I can't drive feed cattle through that way at this time of year, but I can go, you understand, I can go by making some long drives to get into the Silver Creek meadows, or I can go by way of Izee and go to Burns, through the timber, and get good accommodations. (1997.)

When I used the word "desert" in the phrase "high desert" I mean in a desert where there is no water. I supposed every man in this country knew what a desert was, but I will try and explain it to you. It is where you can't practically raise anything, that is, like grain, and there's no water there, and things of that kind. There might be a little bunch grass, there might be sage, and a devil of a lot of rock. I have in mind the lack of water makes the desert. If

you have plenty of water on what you call this desert there's patches there that will be fertile and sometimes you will raise something on it, and sometimes it will frost, but there's things that you
1093 can raise there that won't frost. (1998.)

I have never been through Utah. I have never been down over the line of railroad running from Ogden to Los Angeles. I have been all over the State of Arizona in my younger days.

Exam. ROGERS. Well, take it down in Arizona, west from Tucson, on the line of the Southern Pacific, is this country down here anything like that country down there?

A. Well, no; it isn't just exactly in that—that kind of a country. The nature of it is a good deal the same, a good deal, yes, but that is a lower country. This is higher in elevation than that country, I would think, not knowing the elevation of that country. I never did know the elevation. I was in there when I was a kid.

We don't have the cactus on the desert, I will say that for the desert, because I think it is too cold for the cactus to grow, might get frosted. (1999.)

Recross-examination:

The Silver Lake area—I don't think the Silver Lake area has a sufficient water supply to irrigate it. Any of that country, gentlemen, will raise something if it is irrigated. There may be something—you may not raise anything very tender; you may make a failure in that country, gentlemen, this year, raising grain, and you might raise it next year. It is cold and windy there, and it is warm, also, in the daytime in the summer; and that is an alkali area. There is alkali in the soil, and the water as well.

In going through the Christmas Lake Valley and the Fort Rock country I didn't see any sign of any $2,000,000 investment. It isn't along the road, at least. (2000.) As to whether I would myself undertake a farming operation in the Christmas Lake Valley, if they would ship me the whole valley, gentlemen, as old as I am I wouldn't have it, if they would give me the whole valley.
1094 If they put a railroad through it it wouldn't change my mind a particle.

The profit in the cattle business is not made by feeding on the range. As to whether it is profitable to produce cattle over in central Oregon without using the range for them to feed on, there's men in eastern Oregon raising cattle that don't turn them out at all, they are running on their own private lands. In fact, I fatten 200 steers that don't go out, when I get ready to put them on the market, and 50 or 60 head of cows, that don't go (2001) on the range at all. I can't fatten steers on the range. I can fatten cattle on the range. If a man don't put them on the range he won't make any money. I have lost a lot of money, and I have been running them on the same condition as well. The central Oregon range is not fully stocked at the present time. As to how many more head it will stand, it will be a hard matter for me to tell, but when I can go over in the Harney

Valley like they are this year and see hay stacks every place it looked to me as though it could stand a good many more thousand cattle; and the different ranches in my country that used to run 600 to 1,000 head of cattle hasn't even got a cow on it, hasn't even got a renter on. Because the men went broke, the depression, just went broke, that's all. The range conditions didn't break. The financial conditions broke.

Q. But you say that you go over in the Harney Valley and you see the hay stacks around, and that sort of thing, and you (2002) figure that more cattle can be raised in that manner, or from that source; but how about the range, the Government range, and the private range, over there, the pasture land? Will that hold more cattle than it has got?

A. Well, now, I will tell you, gentlemen, I can't answer that
1095 question. The outside range can hold more cattle, but I don't know anything about how the forest reserves is filled up. Now, I wouldn't say. But the outside range can hold more cattle, and a great many cattle is in pasture that isn't turned out in the Harney Valley.

Comr. McManamy. Mr. Mills, will you tell me something about where this high desert begins and where it ends? You speak of hay stacks and the development in the Harney Valley.

A. If I could see a map of that country it might be so.

Comr. McManamy. Well, this is a very small one.

A. If I could see a map.

Comr. McManamy. Is Wagontire on that desert?

A. Now, Wagontire is a very small area, and there's little springs that breaks out on the south side of Wagontire, runs away down and sinks in the desert. Now, that is where I stated the desert begins. Now, on the east it is—well, I don't know just exactly how big; I can get the distances. I could (2003) tell how far it is from Wagontire to Silver Creek—there's no water, only some lakes that Bill Brown has put dams in.

Comr. McManamy. Well, then, east and west the high desert may be considered as the distance, approximately, between Wagontire and Silver Creek? Here is Wagontire Mountain [indicating].

A. Now, you don't get water from Wagontire until you get—where is Alkali Lake?

Comr. McManamy. Well, Alkali Lake is south here.

A. Now, you don't get no water from here clear across to Wagontire. Now, there a bored well here—I can't tell you just how far out it is from Wagontire. Now, here is Suntex right here; Suntex is
on Silver Creek. Now, from Wagontire there's no water
1096 across that area with the exceptions of some lakes that Bill Brown has put dams across and hold the snow water. Now, they go from Sheep Lake here—he has held enough in that to have a little water, I think, the year around. I doubt whether it will be there this year. Sometimes it holds water; a good many years it goes dry. Now, from the west—which is west?

Comr. McMANAMY. This is west [indicating].

A. Now, you can just go clear through here. There is the desert [indicating].

Comr. McMANAMY. And here is Silver Lake [indicating]. (2004.)

A. Silver Lake, yes. The section of the country between Wagontire and Silver Lake is what I call the desert.

The very highest peak on my upper ranch is about 4,400 feet elevation. My lower ranch is about 3,800 feet. As to whether the elevation of the section called the high desert is about 4,500 feet, I really don't know the elevation of that desert. But I want to tell you something about elevations in this country, gentlemen, I can raise things—now, up in the timber they do raise it where it is a high elevation, tender garden stuff that I can't raise at my home place. It is just the protection of the timber, or some climatical conditions, what I can't explain.

Mr. DUNCAN. Mr. Mills, just one question: You spoke of small springs on Wagontire Mountain. Isn't it a fact that there is one creek that runs off Wagontire Mountain for practically the entire year, known as Egly Creek?

A. I haven't said but what the water ran practically off of Wagontire the entire year. I think it does, but it doesn't (2005) run very far. There is a creek running from springs. There would have to be a creek running from almost any spring. I think you understand that.

Mr. DUNCAN. Have you been to the head of Egly Creek?

1097 A. Oh, I have been all over Wagontire. If there is a creek in there that I don't know anything about it is a new creek, it has just broke out.

Wagontire is quite well-watered, but it is a very small area. There is plenty of water for livestock, on Wagontire Mountain. (2006.)

1098 J. R. HARVEY was thereupon called as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct examination:

I am 63 years old, and reside at Grants Pass, Oregon. I am secretary of the Chamber of Commerce, Grants Pass. I have resided in Josephine County since 1901. I have been secretary of the Chamber of Commerce a little over two years. Prior to that time I was a mining engineer and mine operator, leased mines (2008); manager and operator of mines. I was engaged in the mining business in southern Oregon about 18 years.

As to my experience in investigating the mineral resources of southern Oregon and northern California: I have been practically all over that district. Two years I was one of the examiners for the Government on the classification of the Oregon & California lands from Roseburg south to the line—mineral, timber, and agriculture. During that period of time I had opportunities for observation of

the timber resources of the Rogue River Valley in a general way. I went over practically most of the odd sections, and going through from one odd section to another we went through the even, so we covered it pretty thoroughly.

During my experience as secretary of the Chamber of Commerce I have had opportunities for observation of the agricultural resources of the valley more or less. (2009.)

The territory affected by the petition of the Grants Pass Chamber of Commerce for intervention would be Jackson and Josephine Counties, part of Curry County, Del Norte County. Jackson, Josephine, and Curry Counties are in Oregon, and Del Norte County is in northwestern California, but they are all practically in the same watershed or same layout. That is, Rogue River Valley section which lies in the southwestern part of the State. Del Norte County is in the northwestern part of California. A portion of
1099 Klamath, Douglas, Siskiyou, and Del Norte Counties are also included in the Rogue River watershed. Siskiyou County is in California.

As to the area in square miles of the (2010) section of the country which you are here representing: Well, roughly, it is about 70 miles north and south and 120 east and west. It shows, practically, on the map. About 8,400 or 8,500 square miles—about 5,370,000 acres. That includes the Del Norte County territory. There are about 8,800,000 acres of land in Jackson County and about 8,200,000 in Josephine County. (2011.) There are about 950,000 acres of land in Curry County, but we figure on the south half in this territory alone. That would be a total of about 3,890,000 acres in southern Oregon. I don't know what the area in acres of Del Norte County is, but I can figure it very closely. Del Norte is, I think, the smallest county in California. I haven't the figures on Del Norte County separately. I put them all in together, except Jackson and Josephine Counties. I have got those separate.

This section is a mountainous country, interspersed with rich agricultural valleys, principally the Rogue River and its tributaries, the Illinois and its tributaries, and some of the Klamath comes in it. (2012.) And the Rogue River is the drainage river for all this portion of southern Oregon that we are talking about. The principal cities in the territory we are interested in are Medford, Ashland, Grants Pass, Crescent City, the Klamath Falls country. Klamath Falls is east of us.

The population of Medford is 10,000 to 12,000; Grants Pass, 7,200; Ashland, 7,000; and Crescent City about 3,000.

Ashland, Medford, and Grants Pass are in the center of the Rogue River Valley, and Crescent City on the seacoast. (2013.) And commencing at the eastern end of the valley is Ashland, and then Medford, and then Grants Pass. Grants Pass and Ashland are 45 miles apart by road; Medford and Grants Pass 32 miles apart. Ashland is about 12 miles from Medford.

1100 The population of Jackson County is about 35,000; Josephine, 15,000; Del Norte, 6,000; Curry County, 4,000; total, 55,000. The census in 1920 was at low ebb, and Josephine and Jackson County both have grown very rapidly in the meantime. Between the 1910 census and 1920 there was actually a decrease in population. Since 1920 there has been a very rapid increase; and also in the Crescent City area, the coast territory. (2014.)

The principal industries in that territory are agriculture, mining, and timber.

As to the assessed valuations of the lands in each of these counties, according to equalization made by the State Tax Commission: Jackson County is about 34,000,000; Josephine, about 10,000,000; Del Norte County, about 17,000,000; Curry County, 5,600,000; total 66,600,000. About 68 to 70 per cent of the land belongs to the Government—is tax exempt. That is in national forest reserves mostly. The national forests in the territory are Siskiyou, part of Klamath, part of Crater and just a small part of the Trinity, in the south.

The number of acres of tillable land (2015) in these counties are: Jackson County, approximately 160,000 acres; Josephine County, about 100,000 acres; and Del Norte County, about 18,000 acres to 20,000, or less.

As to the irrigation districts organized under State irrigation district laws that are operating in the Rogue River Valley: In southwestern Oregon, in this territory, there is the Talent irrigation district, Eagle Point, Gold Hill, Medford, Grants Pass, and Fort Vannoy. I have named them in their relative positions, from east to west—south to north, as we call it. The Rogue River runs east to west in that part of the valley. I am familiar with the Grants Pass and Fort Vannoy districts. In the Grants Pass district there are between 15,000 and 18,000 irrigable acres, and Fort Vannoy
1101 has about 1,000 acres. (2016.) Josephine County about 12,000 acres in private is outside of these irrigation districts. The total area of irrigated land in Josephine County under both irrigation districts and private districts would be about 30,000 acres.

The Fort Vannoy district, 1,000 acres, is in a very high state of cultivation. It was started several years ago—in a fine state of cultivation. The Grants Pass district started practically 4 years ago, and that is growing very rapidly. We have had in the last 3 years practically 1,200 new families going in on to that 12,000 or 13,000 acres. Most of that land in 1923 and '24 was in brush. The larger part of it is cleared and is in crop, in small farms, ten, the average farm, I think, in the district now is about 11 acres.

Q. These 1,200 families that have settled on these lands in the Grants Pass district, I assume that probably represents a population of 4,000 or 5,000 people?

A. New population. (2017.)

The Southern Pacific Railroad serves this territory. As to whether there are any other railroads in that territory: There are two short lines, two stub lines—one from Grants Pass west 14⅝ miles, and one from Medford east to Butte Falls, a little beyond Butte Falls—we know it as the P. & E. It is now the Oregon Owens. Del Norte County has no railroad facilities whatever, except a logging road just out from town, in the woods. No outlet. That is operating now, they are going into the woods about 4 or 5 miles, bringing in logs into the mill.

Curry County has really practically their first road this year, highway through north along the coast, open this year for real traffic. There are no railroads in Curry County.

As to the nearest railroad affording an outlet to Crescent (2018) City in Del Norte County: The end of the C. O. &. C. Railroad from Grants Pass west, now at Waters Creek, and the Northwestern
1102 Pacific, which is north of Eureka, about Trinidad. That is about 70 miles or more south in California.

The Southern Pacific was constructed into and through the Rogue River Valley about 1884. Settlement began in the Rogue River Valley about '52.

In shipping any of the products of this territory by rail, they must follow north by Portland or south by Roseville going to eastern points. The route would be north by Portland and east of Ogden, and so forth; east or south by Roseville, Calif. Roseville is near Sacramento, 18 miles north of Sacramento. I don't know exactly the mileage from Grants Pass to Ogden by the (2019) northern route. It is practically 300 miles from Grants Pass to Portland. They have got to go about 400 miles south before they get to going east.

The Pacific & Eastern Railroad was built out of Medford to Butte Falls about 1912, I think. Butte Falls lies northeast from Medford, about 32 miles. That railroad has been constructed to Butte Falls, and now they are 8 or 10 miles beyond (2020) it, as I understand it.

In 1910, 1911, or 1912 there was a survey made from Butte Falls to Willow Creek, north of Fish Lake and Diamond Lake, to what was then known as Harriman Lodge, across Klamath Lake, to connect to a point near Chiloquin, and also one from Harriman Lodge south to Klamath Falls on the east side of Klamath Lake. Those surveys were made by John F. Stevens and his party for the Hill interests, James J. Hill, who owned this Butte Falls Road at that time. The Owens Lumber Company, as I understand it, owns that Butte Falls line now. They are using it for hauling logs into Medford. They have a sawmill in Medford. They have a timber belt and timber area of land owned by them over in the Butte Falls territory; they have a large belt between Harriman Lodge and (2021)—principally north of Fish Lake, as I understand it.

1103 The California, Oregon & Coast Railroad was constructed from Grants Pass southwestward towards Crescent City about 1914 or 1915. I understand there is about 40 miles to be constructed

from the present terminus of the Butte Falls line, that is, the Pacific & Eastern, now owned by the Oregon-Owens Lumber Company, to Chiloquin on the Southern Pacific. And that would connect up the Pacific & Eastern, or Medford district, with the Southern Pacific and the Northern lines, the joint user line north and south.

The Grants Pass-Crescent City Railroad was constructed about 1915. As to who constructed that road in the first instance: The city of Grants Pass, issued a bond issue. It was a municipal railroad to begin with. About 14⅝ miles of that road have been constructed (2022) southwesterly toward Crescent City. That goes to Waters Creek. About 75 miles will have to be constructed to connect the present terminus of the road at Waters Creek with Crescent City. The intention of the municipality, the people who voted this bond issue, toward the construction of this railroad to Crescent City was to get out to Tidewater. That is, to construct a road, extend it on to Crescent City. That railroad would pass through what is known as the Illinois Valley, which starts out there about the 20-mile point. The center of the Illinois Valley, about Kirby, is 30 miles from Grants Pass. The Illinois River runs into the Rogue River about 20 or 30 miles from the mouth. (2023.) That railroad is in a receiver's hands, being operated by the city of Grants Pass, receiver. Two or three surveys were made to extend this railroad to Crescent City. The original survey was made in about 1900, 1901. The plans were commenced to build this railroad in 1900. So far they have got 15 miles of the road constructed and in operation.

If this Butte Falls line, what is known as the Pacific & Eastern, were extended northeasterly to a connection with the
1104 Southern Pacific, or some other line in Klamath County across the Cascades, and a line was constructed from Crane to Odell as proposed by the petition of the State public service commission, a savings in (2024) distance eastward of approximately 280 miles would be for fruit traffic from southern Oregon as against the present route.

We grow almost all crops of the temperate zone—apples, pears, about 500 acres of bulbs, grain, hops. When I speak of bulbs I mean flower bulbs—gladiolus, tulips, and so forth, our high state of cultivation there in the irrigation districts, the farmers are raising those with good profit. Pears and apples, hay, alfalfa, cherries, peaches, walnuts, strawberries, and so forth, are a large proportion of the agricultural products of that valley. (2025.) Raspberries, blackberries, and strawberries grow without any cultivation practically. We raise melons, and all sorts of truck crops. As a matter of fact, we can raise any crop that is produced in the temperate zone, except citrus fruits, practically. We do raise a few figs, but we don't consider that commercial. The climatic conditions for the growing of all crops of the temperate zone are excellent. We grow winter cauliflower, January, February, and March, spinach every month in the year. We have a long growing season, with cold nights. Corn, yellow dent corn and white, we have taken for the last 5

years, I think, the first prize at the Portland show for grain. We have corn in our exhibit there 15 feet 9 inches tall, and we have corn this crop, this year, over 12½ feet tall, cut in the middle of July (2026), the 24th of July. Some of these valleys are as rich valleys, practically, as in the West, anywhere in the world. And there's better cultivation, a better class of farmers which we are getting in all the time, and it will grow big tonnage per acre.

1105 The average farm in the Grants Pass irrigation district supporting a family is about 10 or 11 acres. In other words, we don't have any 160-acre ranches down in the irrigation districts. There has been invested in the Grants Pass irrigation district itself $1,500,000, and the private irrigation plants about $12,000, and (2027) $35,000 in the Vannoy district. The money was actually expended in those districts for irrigation works alone. They take their water from the Rogue River. There is an abundant supply of water for their land. There can't be a question of shortage, because they have twice or three times as much as the valley needs. It is a fact that they have the whole river available. About $1,200,000 has been expended for (2028) irrigation districts and on lands under private ditches, outside of these two irrigation districts I spoke about; there's about 12,000 acres, at $100 an acre. A little more than 12,000 acres of the Grants Pass district, of the 15,000 or 16,000 acres in that district, have been actually cleared and brought under cultivation and irrigation. That has been done within 3 to 4 years. The water was turned on about 1923, the last of 1923 and the first of 1924. The works were constructed during the war period, practically.

The average holdings in that district before (2029) the irrigation systems were about 60 acres. It is now between 10 and 11 acres.

About 1,200 families moved onto that district since the water was turned on to the land, into the canals of the system, and irrigation began. In one 12-months period that we have had an actual count of there was 481 new families came in there—61 per cent of them came from California—the rest of them were from all over the United States. In 1922 or 1923 there were very few families in that district, living on those lands—just a few little

1106 scattered farms, and mostly in brush and small timber, that has been cut off. Most of that land was covered with brush and timber and jack rabbits. It costs about $50 per acre to clear that land. (2030.) As to whether I think that is a conservative estimate: There were small patches, mostly cleared by the people themselves—some of them contracted as low as $28 an acre, some of it cost $70; $50 is about what they figure. Some of them sold some of the wood off of it, some of them broke even, but $50 is about what they figure.

I don't know what the total valuation of the farms in the district is, but it is all dotted with little new homes, and people raising garden truck, some bulbs last year. Farms and houses are in, and thrifty looking as a rule. That has all been done in the last 10 years.

This Grants Pass district extends from below the Gold Hill district in practically the Jackson County line, 6 miles east of Grants Pass, and about 10 or 12 miles down the river. This territory surrounds the city of Grants Pass (2031), and westerly of that, extending to the westerly terminus of the valley, is the Fort Vannoy district, a small district of about 1,000 acres, a little over. Both districts produce in general about the same kind of crops. As to whether they are subject to the general condition: They are in alfalfa, small farms.

Q. Can you give us some idea of the area of land in Josephine County in the Illinois Valley that is susceptible to irrigation that hasn't been irrigated or brought under irrigation?

A. The Illinois Valley is—the valley floor is variously estimated from 48,000 to 70,000. The Forest Service, their figure is 53,000 acres of farm land in the valley. The center of it is practically Kirby, 30 miles from Grants Pass.

1107 Q. And is there water available for those lands in the Illinois Valley?

A. There's forks—the Illinois River, the east fork, the west fork, Sucker Creek, and Althouse, in that territory, all go through this valley, and out of the 50,000 acres (2032), say, there are probably 5,000 acres under cultivation, about that, at the present time and are under irrigation. Most of that is irrigated from Tucker and Althouse, practically, but there is water available all through that district. There is an abundance of water. As to the 40,000 or 50,000 acres that isn't irrigated—that survey was made by Farmer Smith along about 1910 or 1912, I should think, and he made a very glowing report of the fertility and possibilities of producing tonnage in that valley.

There are storage facilities for the storage of water in the Illinois Valley, especially up Althouse and Sucker Creeks. Well, as far as that is concerned, the east fork of the Illinois, as well. Plenty of storage facilities. It is entirely practical to figure on irrigating that district at a very low cost. That district is 20 miles from railroad transportation. (2033.) That is the Waters Creek; the Grants Pass municipal railroad.

Q. How far is it from the Southern Pacific? The additional 15 miles?

A. Yes; Kirby is 30 miles—29 miles from Grants Pass.

The Illinois Valley was the first settled portion of Josephine County, and Kirby was the county seat. Southern Oregon was practically developed through the Crescent City gateway, a trail over the mountains through there that came in through Jacksonville and Kirby.

Josephine County has about 2,500 cows, compared with Del Norte, about 5,000 over there. Dairying is growing rapidly in Josephine County. We are making all of our dairy product into butter, shipping it south, mostly to San Francisco.

Assuming that the Rogue River Valley had a railroad con-
1108 nection eastward into Klamath County, and a line from Crane to Odell was constructed as petitioned for by the State public service commission, as to what would be the benefits accruing to this southern Oregon region, in respect to the agricultural (2034) products: It would give us a shorter line east especially for our pears and apples, etc., to our market. As to rapid transportation for these fruits in the valley: It would save a day or two; the same kind of construction of road, and so forth. As to what extent that would stimulate further development of these lands: Better transportation—our difficulty now is that we can only ship the cream of our products, the best, of the things in which we excel everyone else, practically. The pears are practically better than anyone else's in the country. Pears and apples are the great agricultural problem in southern Oregon today. The difficulty down there is the high price of getting the product to market (2035) and transportation facilities.

Exam. ROGERS. What was this line you said into Klamath County? You said you had two lines—the Crane-Odell line, and you had some other line.

A. No; we were talking about the cross-State Crane to Odell Lake Road, and this from Butte Falls east, east to the north and south line with the common user.

Exam. ROGERS. I didn't just understand what construction it was down in Jackson County and Klamath County that you referred to.

A. From Butte Falls, they are out about 10 or 12 miles beyond Butte Falls now with their road, and from there along the old Stevens survey across the lake, to a point near Chiloquin. From Butte Falls the Owens Lumber Company are now constructing down Willow Creek. I don't know whether they are going east here over to the Southern Pacific. I don't know just where they are going, but they are building on that line of that survey. (2036.)

1109 They informed me the day before yesterday they had just given orders to go along there 7 miles to their timber.

Exam. ROGERS. What I had in mind, the question as put to you was if you had this construction down here through Butte Falls and had the Crane-Odell line, that a certain thing would be true, what would there be without this line down here, and just with the Crane-Odell line?

A. Well, we would have to go around by the way of Portland or Roseville just the same as they are now. (2037.)

Assuming that a road was extended from Crane to Odell, thence into Eugene or any portion of the Willamette Valley as to whether there would be also a considerable saving in distance: We would be just about in the same position we are in now. We would still be south of Portland.

If this proposed cross-State line were constructed from Crane to Crescent Lake, on the Natron cut-off, that would provide the shippers of the products of Josephine and Jackson Counties with a new route

to eastern markets by taking the Southern Pacific line up to Eugene and then the present Southern Pacific line from Eugene to Crescent Lake and then the cross-State line east; that would be some help. That route would (2038) be shorter than Roseville and I think it would be a great deal shorter than it is going by Portland; I am quite sure it would.

Most of the pears and apples produced in the valley go to New York and London by rail. They go by Roseville, a good many of them, south and east and north. They go north around by Portland if they route them that way. The London shipments move by rail to New York. Eighty-seven cents, I believe, to New York, and $1.25 a box to London.

1110 Q. (By Mr. CHINNOCK.) What is your idea of the effect of this proposed extension, assuming that the railroad is built from Crane to Odell and that this extension was made from Medford (2039) to Butte Falls into eastern Oregon as a connecting line, what in your opinion would be the effect upon the construction of the road from Grants Pass to Crescent City?

A. I think that it would make it easier, stimulate the building of roads all through that section of the country and make more tonnage, and I think it would make it easier to get an outlet to the coast.

There is a harbor at Crescent City, and they have been coming in there with boats for a good many years in the early days, and they are shipping lumber out of there, about 40,000,000 a year on boats to San Francisco and San Pedro; and the Government is now building a harbor. They have a jetty out about a half or three-quarters of a mile that was built two or three years ago, and made a new appropriation of $710,000 for extending that, which they are working on at the present time. And that harbor, with a railroad from Grants Pass to Crescent City, would give the Rogue River Valley an outlet to the ocean. Construction of the road east would give us an east line shorter. For instance now, pears and apples, every day we can save in getting to the market cuts down the chance of loss by spoiling on the (2040) road, getting into the market. Now then, a shorter, quicker route is what we want for all of our products in this country, especially apples and pears.

As to the amount of timber which is marketable in character: In Jackson County about 20,000,000,000, Josephine 10,000,000,000, and Del Norte County 31,000,000,000; Curry County is 10,000,000,000, and from this area out of Siskiyou County we will take about 5,000,000,000, and out of Douglas County is 60,000,000,000. There is about 10,000,000,000 should come our way and naturally come into this watershed. So that would make 86,000,000,000 feet of timber that is in this area we are talking about.

1111 A large portion of this timber is mature and should be harvested now. I don't know where it is but I have something here on that. E. A. Sherman, of the United States Forest

Service, made a remark in regard to the timber the Government owns in this territory. That remark was made before the river and harbors committee, U. S. Army engineers, Washington, December 15, 1926. That hearing was about (2041) the need for a harbor at Crescent City, and after this hearing was when they made the final appropriation, this last appropriation, and the Government decided to build a harbor in accordance with the Army engineers' figures and plans. Mr. Sherman said "Timber does not all ripen at the same time and go down at the same time, but after it reaches a certain stage, from there on it about holds its own, the loss each year offsetting its growth. The aged veteran goes down but young growths spring up and in the long run it holds its own. If it were not touched, in 100 years there would still be 35,500,000,000 feet of timber"—that is, he is talking about the Government-owned timber in this area west of Grants Pass principally—"and do so as long as the sun shines and the rain falls, and during the next 100 years that we could have 50,000,000,000 feet and at the end of that time still have the equivalent of the original stand untouched."

He goes on and simply states that the could—if that could be harvested right along the Government would have a revenue of close to $1,000,000 a year from the ripe timber and would keep it going on as long as they just harvested the crop of the ripe timber, which is now falling down and making a fire menace, which is now not useful timber because you can't market it; it is too far from the railroad.

The purpose of the statement is, they could harvest (2042) 500,000,000 feet of timber a year from that area for 100 years
1112 and still have the original stand. It matures at that rate each year. It ripens and gets ready for market. Practically all of the redwood timber in this territory is in Del Norte County; very little in Curry. Approximately 75 to 80 per cent of the red wood timber goes to Missouri River points, as I understand. At the present time it goes to San Francisco or San Pedro, most of it, and then east by rail. It goes to San Francisco and San Pedro by boat, and then takes the coast rate to Missouri River points. About 60 or 70 per cent of it goes to Missouri River (2043) points, as I understand.

As to the natural market for the sugar pine, the yellow pine, the fir and cedar that grows in these forests in southern Oregon and northern California: California and the coast and eastern markets, Missouri River.

As to what per cent goes to the eastern markets of the lumber now being cut: I haven't the figures on that exactly, but 40 to 50 per cent of its goes east.

Q. (By Mr. CHINNOCK.) Mr. Harvey, Teutsch Exhibit No. 1 contains a statement about the tonnage, and so forth, available from Josephine County. Now what can you state as to the accuracy of that statement? What page is that on in that exhibit?

A. Page 21. It has some of our crops, and the 91 cars of (2044) mill feed, oats and barley, I would say it is about correct.
1113 Apples, 26 cars; that is low.

Q. That is low?

A. Forty to thirty-five—thirty-five to forty-five cars I would say there. Pears, 63 may be right.

Exam. ROGERS. Do you have in mind the heading at the top of the page?

Mr. CHINNOCK. The heading on the top?

Exam. ROGERS. That is the tonnage that will move over the proposed line.

The WITNESS. Yes; on that basis—I hadn't noticed that—on that cross-State line this is probably about right.

Q. (By Mr. CHINNOCK.) What are some of the figures there, to get them in the record, in connection with your testimony?

A. Mill feed, barley and oats, 91 cars; apples, 26 cars; pears 63 cars. Pears will increase, as considerably more in the last 3 or 4 or 5 years of pears have been put out. Bulbs 40 cars. That will all go east. And we will probably have that number of cars this year. Mill feeds, 55 cars; potential tonnage 185 cars within five years; if we get better transportation facilities you will see a step-up there that will be stronger than this.

The information with reference to who compiled that was derived (2045) from Mr. Teutsch and Mr. H. B. Howell, county agent who has charge of agriculture in our county. Mr. Howell has charge of agriculture in Josephine County. He informed me he prepared this for Mr. Teutsch for this county; and I will say in regard to Mr. Howell that we consider he is ultra-conservative in all of his statements. He is very conservative.

I have prepared a map to be used in connection with my testimony, showing the tonnage of timber and mineral available in the territory represented by the petitioner in intervention. That map shows all of
1114 Curry, Josephine, Jackson, part of Klamath and Del Norte Counties, part of Douglas. It shows the timber under the name of the county, the timber that is cruised and according to the figures of the lumbermen and Government figures in each county, and the position of the principal mines in the district that have either all of their ore or part of it, concentrates or whatever it might be, that will have to find its way to the smelter for treatment. In other words, it will (2046) have to have rail transportation. The heavy blue lines are railroads; no wagon roads, simply railroads; and the red line shows the C. & O. C. proposed line surveys from Grants Pass to Crescent City and up to Applegate, and over into Siskiyou County to Copper mines as well as from Butte Falls east to the Southern Pacific's line at Chiloquin and south of Bend, north and south right there. It shows all the railroads and the proposed extensions of railroads.

(Said map so offered and received was thereupon marked "intervener's Exhibit No. 32, Witness Harvey.")

My testimony is that with the extension of the Grants Pass to Crescent City Railroad a large part of the timber in Del Norte County will be available for shipment eastward. (2047.)

Q. Instead of following the water route to San Francisco and then going east it would go eastward via Grants Pass, Medford, Butte Falls, and the Crane-Odell line, if those lines are constructed.

A. For the reason the redwood will find a different market; it is a different material entirely from fir, pine or cedar; it has a different market, has a different treatment, and so forth, a different use largely.

I testified that most of the market for the redwood timber is in the Missouri river points; and I think about 50 to 60 per cent of it, I am not sure as to that, is for distribution St. Louis—it was a few years ago.

1115 About 75 miles of railroad or less will be required to connect the Grants Pass line with this redwood belt in Del Norte County to Crescent City.

I think about 40,000,000 feet a year of redwood timber is being cut into lumber at Crescent City in Del Norte County. (2048.) We have one sawmill there. There are large holdings of that redwood timber in private ownership in that county. I don't know whether I have the figures on that or not. There are 7 or 8 large owners, large holdings. I don't know as I have that. I don't seem to have that here. The largest owner and operator there is Hobbs Wall, locally known as Hobbs Wall Company, Del Norte Lumber Company. They own and operate sawmills at Crescent City, and own large areas of timberlands there at present.

There are 7 small capacity sawmills in Josephine County, 5 of them in operation. (2049.) There are no large capacity sawmills, 60,000 or 70,000 capacity. And they are just preparing to build a new mill at Grants Pass.

Q. What can you say in general, Mr. Harvey, as to the tonnage of agricultural products, forest and mineral products available in this territory, compared with other sections of the United States, say, with like railroads, or like lack of railroad facilities?

A. I think it would be difficult and almost impossible to find another 100 miles square, such as in southwestern Oregon and north California, that has as much tonnage ready—that has as much tonnage as there is in this 100 square miles anywhere in the United States, and that has inadequate rail facilities.

As to the existence of useful and valuable minerals in southern Oregon and Del Norte County: The Government report on useful minerals in the United States shows that Josephine County has a greater variety of useful minerals than any other like area in the United States. Jackson County, Del Norte, Siskiyou, Curry,

1116 Douglas, some of Klamath, has the largest tonnage of ore exposed, a great deal of it by nature. That is why it is found at present. And probably there are over 100,000 feet of shafts and tunnels, development work, at a cost of $10,000,000 or better, spent

in developing ore. A large amount of it is (2050) ready for transportation; it is ready for shipment.

In Josephine County alone the Government report gives a list of 46 or 47 useful minerals found in there, including clays and limes, quicksilver, iron, different kinds of copper, silicas, pyrites, talcum, etc.

As to an estimate of the amount of copper ores that are available in this territory, that is blocked out: Something in the neighborhood of 100,000,000 tons; and in the Alameda district the estimate of blocked ore is, say, 3,000,000 tons to 5,000,000 tons; that is by the engineer. (2051.) That is a ledge of 200 feet wide, cut by the river and exposed by the river. It is low-grade copper ore. That ledge is 200 feet wide, say 400 feet high. It is developed 400 feet high. In fact, it is 300 feet above the river and there is a shaft down 300 feet below the river in the ore. Say it is 200 feet wide, 400 feet high. That would be 80,000 square feet. That ore will go—10 cubic feet will make a ton; therefore every foot in would be 8,000 tons—every foot into the face that it goes, and it is about 200 feet wide.

I don't know that that ore will all move across the cross-State line. It will go, the matte, concentrate, matte, etc., will finally go to New Jersey, no doubt. I don't know how it will go finally. Now they have over 2 miles of work in that mine.

The Waldo district, the Queen of Bronze mine—the Waldo district, which is southwest of Grants Pass, a little west, the Queen of Bronze mine has produced close to $2,000,000—I think
1117 a little over that. That is a 23-mile wagon haul down to Waters Creek, the end of the Grants Pass-Crescent City Road, the C. & O. C. Road. To mine that ore now and to take it to a smelter at Tacoma at a profit, the ore must be (2052) 12 per cent ore or better, and according to Henry M. Parks there is probably 5,000,000 tons there. Henry M. Parks is the director of the Oregon Bureau of Mines. He made a report on that in 1915, that if the railroad was out close to the mine, built out another 23 miles, that instead of 12 per cent ore that it would be valuable or profitable to ship, 5 per cent ore would have practically the same profit. That is by saving that 23 miles of wagon or truck hauling, and the extra handling. And in that mine, in that district there are something like 20 to 25 times as much 5 per cent ore as there is 12 per cent ore. So the volume of ore depends upon its proximity to transportation.

As to whether this copper ore carries gold: In that group it carries about $4.00 average. That is the Waldo group. That Waldo group of claims is being operated at the present time. They have just been notified of a reduced rate from Waters Creek to Tacoma, which goes into effect, I understand, next month, and they have already started shipping, started getting their ore ready, and, in (2053) fact, this last week shipped their first car of ore, although

this car of ore will go on the present rate. That mine was previously operated during the war; some time during the war period. They operated at a profit then. I will read a quotation from a report of the Queen of Bronze mine. This quotation is from a report of G. E. Stowell, assisting mining engineer of the Oregon Bureau of Mines. He says, "The books in the company's office show that during 3 years' operation there was produced from the Queen of Bronze mine a total of 9,992.3 tons of ore, having a gross value of $432,440.82; and from the Cowboy 842 tons of a value of $13,562.91. The total net smelting returns, deducting freight and smelting
charges, was approximately $350,000. The number of cars
1118 shipped was 183. The grade of ore varying from 5.16 to
16.33 per cent copper and 4 ounces to four-tenths to forty-four hundredths ounces gold."

The Queen of Bronze and the Cowboy mine that they speak of in this report—the Queen of Bronze is the mine I spoke of, and the Cowboy belongs to the same company, is in the same (2054) line south, about 2 miles south. This company owns the Queen of Bronze, the Mabel, the Little, and the Cowboy, along the sidehill, and the ore was found and exposed by the creeks running down the sidehill and cutting this ore body. That is how it was found.

This same mine was the mine that was mined in 1900, about 1900 was developed, the Queen of Bronze, and the Monumental, which is south of the Bronze on this same map, southwest about 2 inches across the line, both being developed in about 1900 by the same company, Denver and Salt Lake—Denver and Colorado Springs miners, mining men, and they made a survey from Grants Pass to Crescent City of this route that is marked in red, purchased rights of way, made a survey, in order to get this ore to tidewater or to a point of smelter, which they expected to have at Crescent City. As I am credibly informed, they spent $137,000 on surveys, rights of way, terminal grounds at Grants Pass, 30 odd acres, and in 1906, I believe it was the day of the San Francisco fire, they were unloading a train of equipment to start building that road, and other interests were San Francisco interests and they loaded up their equipment and went away.

The map that I prepared and which has been identified shows the location of this and other ore bearing bodies to this section. (2055.)

Q. And does it show the tonnage?

A. No.

Q. Of these various ores?

A. Only in a general way. But I can give you a little
1119 insight into that. In the group south of there, Preston Peak
mine, 250,000 tons; that is practically the Preston Peak. Go over here to the Blue Ledge, or take the next one east of that, the Gray Eagle mine, which belongs to —. Those mines are all shown on the map; that is at the end of this stub road, stub survey. The Gray Eagle, there is 4,000,000 tons there developed by tunnels and

shafts and crosscuts, and in addition to that they have something like 12,000 feet of diamond drill holes, ahead in the ore. There are a number of other small properties, like the McCann, which is north of it in that district, but those smaller properties, their development depends upon the larger company getting transportation into the district.

The circle east of that, the Blue Ledge District, contains—I have a list here of 47 mining companies that own property in there. The largest one is the Blue Ledge mine, which has about 750,000 tons of high-grade ore and a large amount of low-grade ore.

They also have 4,000,000 tons of pyrite, which they blocked out and developed in their work of developing their (2056) ore. That district is marked with those two lines in a general way; it is about six miles wide and about 20 miles long.

I have a list of properties that have had more or less work on them from a few hundred feet to several thousand feet on each mine. Iron Hand, for instance, has about 420,000 tons; the Great Eastern about 150,000 tons; the Cook and Green has over 5,000,000 tons of pyrite. There is very little work done on it, but it is exposed by nature. That pyrite is for the same use practically as sulphur. And the Blue Ledge Company, the owners of the Blue Ledge, are the Guggenheim people, and the owners of the Tacoma smelter, are now making an effort to get that tonnage to the Tacoma smelter,
trying to get a rate which will enable them to ship that ore to
1120 Tacoma. They plan to build, if rates, and so forth, are suitable, a road from the Blue Ledge mine along this line north, on the Applegate River, through Ruch and over to Jacksonville, connecting with the Southern Pacific at Medford north. That line of railroad is now projected and they have hopes they will be enabled to get a rate which will enable them to move that (2057) tonnage. That is shown on our map. That is a dotted line going through Ruch to Jacksonville. That will tap this whole Blue Ledge district at the upper end of the Applegate River, which this line from Wilderville runs up.

Q. Now, from your observation and knowledge of that country, what in your opinion has retarded the development of these copper mines and the production of copper in that country?

A. It has always been a matter of transportation. All the copper and big tonnage is, as a rule, 40 to 50 to 60 miles away from rail transportation.

During the war a large tonnage of chrome was shipped out of this district, from Crescent City harbor, and hauled to Waters Creek and Grants Pass. Some of the largest deposits of chrome in the United States are practically on the line between California and Oregon, northern California, and southern Oregon. (2058.) I should say the figure we have is somewhere between 60 and 70 per cent of the chrome of the United States is in this mountain region here. Chrome steel is used for making chrome colors, khaki colors, and for dyes—hundreds of uses. The supply comes from Turkey,

Australia, and from Cuba, and there is no duty on it. It is now worth about $24 or $25 in Pittsburgh, and during the war, when the U-boats stopped boats coming from Australia and different parts of the world, we had to get our chrome in the United States. Therefore the value of chrome went up from about $20 to $125, and the Army, the Government notified us that every ton of chrome produced put another four soldiers in Germany, in Europe. So there was
1121 great effort made to get all the chrome we could. There were several hundred miles of wagon roads and trails built in this part of the country to get chrome to the railroad.

Q. Well what, in your opinion, is the reason for the lack of development of the production of chrome in that territory, which contains, as you say, about 70 per cent of the chrome produced in the United States?

A. That comes from foreign countries now, where they have cheap labor to make it cheap. If we get in difficulty again here, that is where they have got to get the chrome from for (2059) war purposes, and they are commencing to use if—if we have some smelters or iron furnaces on the coast, which are coming in the next few years, this is where they will get their linings for the smelters. They use this chrome ore for linings of the smelters, and for making certain types of steel and iron.

Comr. McMANAMY. I am raising no question as to this testimony, because I assume before you have finished you will in some way connect it up with this complaint, which involves a cross-State line from Crane to Crescent Lake. That is the understanding?

Mr. CHINNOCK. I will state that our theory of the situation is that that ore will afford a large tonnage for this railroad eventually.

Comr. McMANAMY. But you will have some way of reaching it?

Mr. CHINNOCK. Well, I hope so, your Honor. (2060.)

With respect to the lime deposits in southern Oregon: We have several on our railroad from Grants Pass to Waters Creek. From Waters Creek the C. & O. C. Road built a spur of 3 miles from Wilderville, a 10-mile point to what is known as Marble Mountain, and they are taking lime rock from there, making 1,500 barrels of cement a day at Gold Hill, east of Grants Pass, 18 miles on the Southern Pacific. That road during the first 8 days of this
1122 month handled 28 cars of lumber, 20 of them local, 8 went east; 75 cars of rock, that is this limestone, from Wilderville to Gold Hill; 6 of wood, 6 cars of logs, which came from 20 miles beyond our terminus of the road at Waters Creek, hauled in 23 miles out there, going to Portland. They were cedar logs going to Japan. And one car of copper ore; that is the first car of copper ore that has been shipped in a number of years, on account of the reduction of rate. Making a total of 130 cars in 8 days, or 16 cars a day over that little stub road. This lime rock is very high grade. Most of that runs from 97 to 99½ per cent; most of it 98 and 98½ per cent pure lime. (2061.)

This Portland Beaver Cement Company that owns that Marble Mountain, which is marked 15,000,000 tons on this map, claim that now that they have opened it up they have 2,000,000 tons of lime in that belt. That 15,000,000 tons was exposed by nature on the top of the mountain. It stood up there. You could walk around it, without any mining. That is the way most of the lime is exposed in that area. This lime rock is shipped from Marble Mountain, where it is quarried, over this C. & O. C. to Grants Pass, this little stub line, and then via the Southern Pacific to Gold Hill; and then it is manufactured into cement. That cement goes all up and down the coast. That lime plant, in addition to shipping in gypsum from Nevada, ship in crude oil—I have the figures but I can't furnish them just now. I think you have them. Some of this lime rock has also been shipped to Oregon City, south of Portland here, to the paper mills, and into southern Washington, on account of its purity. It is so high grade that (2062) it is cheaper for them to pay to get it from southern Oregon, where it is a little longer haul, than it is from some nearby places in Washington, where the grade is not so high.

1123 As to what extent the natural resources of this territory, Jackson, Josephine, Curry, Del Norte, Northern Siskiyou Counties and southern Douglas, have been developed and utilized up to the present time: Well, in agriculture, for instance, in only a few of the richest places, where we have grown a few of the crops to the highest quality. And as to timber, it has not been started. And in the mineral mining and mining tonnage it is hardly scratched. On account of its isolation away from transportation, until the last few years, there were very poor roads. (2063.) Of the mining tonnages, there is none here except what has practically stood out of the ground. There has been no hunting and searching underground for possible more ore.

I am acquainted with the sentiment of the people living in this area shown on our map, toward the railroad construction project that is involved in this proceeding, namely, the building of a line of railroad from Crane to Crescent Lake. I know that they are very anxious to get a cross-State line in the southern part of Oregon, through the southern part of Oregon, this part of Oregon that is tax exempt. We are hoping to get it developed and get more people in it as to divide the tax burden over a larger number of people and therefore develop the southern part of Oregon. I have not observed in the whole area any division of sentiment on that point among people that really know what it means.

Efforts in our territory down there have been made to invite and enlist the investment of outside capital for the purpose of developing and exploiting these natural resources. They have met with success only in certain instances, where we are close to trans- (2064) portation, and where they could——

Q. What has been, as you have observed it, the obstacle to interesting capital in sufficient amounts to be invested in the development of the natural resources of this territory?

A. All the territory west, in fact practically all of Josephine
1124 County, the mineral resources and timber in there are too far from transportation to be of value or interest. Some people have been buying timber, held it for a long time, hoping for transportation. With the present roads, 15 or 20 miles is about the limit they have been hauling logs to the mill by wagon road.

[File endorsement omitted.]

1125 CHARLES T. BAKER was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct examination:

I am twenty-eight years old; reside at Medford, Oregon, and I am secretary of the Medford Chamber of Commerce; which position I have held about two years. In that position I have had occasion to investigate the agricultural, timber, and mineral resources of the county to a certain extent. The population of the city of Medford is about 12,500 and of Jackson County, about 25,000. I know the principal industries of my county—they are agriculture, mining, and timber. The agricultural products are principally deciduous fruits, apples and pears, vegetables, hay, grain—almost any product that can be raised in a (2066) temperate zone, with the exception of citrus fruits. The pear orchards at the present time, there are some 10,000 acres—about 10,272 acres—of which 5,176 are over sixteen years old, meaning that that number of acres are in full bearing at the present time. Pear trees reach their full bearing stage at about fifteen years.

The climatic conditions of my county are equable the year round, with very few extreme temperatures either of heat or cold, and the soil is extremely rich in nearly all parts of the county. Tributary to Medford, that is, in Jackson County, there are four major irrigation districts, having a total of 29,988 acres. In addition there are 38,381 acres under private appropriation for irrigation, or a total of 68,369 acres under irrigation. (2067.) There is plenty of water for irrigation at all times for the lands under irrigation at present. The acreage of irrigable lands in irrigation districts in my county alone is 29,000 acres. The cost of the irrigation systems of these districts themselves was about $2,980,000, invested in irrigation works alone.

The total cost of irrigation works for all the lands under
1126 irrigation in my county is about $6,818,000, including the lands under private ditches. They irrigate the pear orchards down in that country.

As to the growing season for crops in that valley, certain crops can be grown throughout the entire year; that is, growing is in progress throughout the entire year for different crops. (2068.)

Land values vary according to the extent of cultivation of the land. Land can be obtained as low as fifty dollars an acre under

irrigation. On the other hand, fully developed farm land, orchard land, is worth as high as $1,500 to $2,000 an acre. That is where they have the full acreage in maturing trees.

The principal agricultural products of these lands, aside from pears and apples, are vegetables, small fruits, hay and grain, and dairy products.

As to the increase in fruit tonnage in my part of the valley, in the last three or four years since I have been there: The principal tonnage in the Rogue River Valley has increased rapidly in the past five years and undoubtedly will increase as rapidly or more rapidly within the next five years. The production of pears in my county in 1927 was 2,911 carloads, which was the amount shipped out of Medford. Ninety per cent of them went east of the Missouri River (2069) and were shipped by the Southern Pacific through Roseville; the majority of them went east.

The average haul for that season, as nearly as we could determine, is 3,292 miles per car.

I consider the greatest handicap to the production of pears in that valley is marketing, and I include in the word "marketing," the facilities for handling the distribution of the fruit; that is, transportation and selling. The transportation cost for marketing the 1927 pear crop was approximately $1,250,000, for freight. I estimate the 1928 pear crop at about 3,500 or 3,600 carloads and the apple crop at about 500 carloads (2070). The acreage of the 1127 apple orchards in my valley is decreasing. Pear plantings are increasing every year. The amount of capital invested in the fruit industry in the Rogue River Valley is not less than $10,000,000.

Pears are marketed through agencies located in Medford and having offices in the East in the principal markets, of which there are 21 in the city of Medford. There are cold storage facilities there to the extent of about 390 carloads, and packing houses to take care of the crop each year. Part of this pear crop goes abroad to Europe, to London, and that is shipped by rail eastward; and some of it comes to Portland and goes around, ships from here, but the majority (2071) of it goes East and is exported from New York.

As to the advantages, in my opinion, in a shorter route eastward for transportation of this pear crop: If a line was constructed from Crane to Odell and made to connect up with the Medford line at Butte Falls, it would save at least two days in transportation east on a highly perishable crop. In any event, if the line from Crane to Odell was connected up there would also be a saving to a certain extent through Eugene, but it would not be as much as if the other line was constructed.

Exam. ROGERS. If I understand, Mr. Teutsch is the principal agricultural witness in this case so far, isn't he? He did not allow anything for Jackson and Josephine Counties, excepting in the instance that this Butte Falls line was constructed.

Mr. ELLIS. Except he allowed 50 cars of feed. Inbound shipments of feed at 50 cars is all the allowance, I believe.

Exam. ROGERS. Well, on pages 21 and 22 of the exhibit——

Mr. ELLIS. Yes; on page 22.

Exam. ROGERS. Concerning the 50 cars he concluded, "Fifty per cent of this total tonnage available within five years if (2072) Butte Falls line is built." Now do you agree with that, Mr. Witness, or not?

1128 A. I believe if the Butte Falls line is built, a good portion of the fruit tonnage would move that way rather than south.

Exam. ROGERS. What if it is not built?

A. Well, I can't say. Some of it undoubtedly would; I don't know how big a percentage.

As to the pay roll of this fruit crop; there are about 4,000 people employed for a period of a month and a half, and the pay roll would amount to about $750,000 a year—I should say two months and a half. As I said before, the tonnage of apples shipped out from Medford is decreasing, but this year's crop is estimated at about 500 cars and the decrease is being taken care of by an increase in the pear shipments. Other agricultural products in the line of vegetables, and so forth, are not being shipped out to any great extent, on account of marketing conditions. Small fruits, cherries (2017), apples, prunes, plums, and apricots, are shipped out and are shipped east to some extent. There is one cannery in my city. Part of these canneries go east; part of them are distributed on the coast, about 40 per cent, I think. This year practically all of the output of one of the canneries will go east on one consignment order.

In my opinion, the chief problem confronting the agricultural development of my county is distribution. I have a statement in reference to the destination points of pears shipped out of Medford in 1927, secured from the individual shippers in the Rogue River Valley. It purports to show the number of cars shipped to the various cities and the various States of the United States, the weight of these cars, the rate paid, the total revenue paid, the mileage of haul and the average haul. (2074.) I prepared it myself from reliable sources of information. (2075.) The statement shows destination points of about fifty per cent of the pear crop in 1927 and does not show the destination of all the crop, for the reason

1129 that the portion of the crop that was sold while en route or diverted after being sold, we had no definite record of its ultimate destination, and this shows only the tonnage that we absolutely knew was delivered and unloaded at these points. It is indicative of the distribution of the entire crop, however. (Said statement was thereupon received in evidence and marked "Intervener's Exhibit No. 33. Witness Baker.") (2076.)

Exam. ROGERS. Before we leave the fruits and pears, do you know how they are routed?

A. The majority of the fruit is routed from Medford, through Roseville on the Southern Pacific.

Exam. ROGERS. Does the shipper route it?

A. There is some routing through the Portland gateway, but it is restricted routing.

Exam. ROGERS. What I had in mind was, does the shipper route it, tell the carrier which way to take it, or do they leave that to the carrier?

A. Well, as I understand it, this condition is such as this: If it goes through Portland there are only certain routes that can be taken, and if it goes through the Roseville gateway then it can take almost any of several routes east.

Exam. ROGERS. Under the tariff, you mean?

A. Yes, sir; under the tariff.

There are about ten or twelve sawmills in my county; I do not know exactly. The annual output of those mills is about 125,000,000 feet. The annual pay roll is about a million and a half. (2077.) A few over a thousand men are employed in that industry. The lumber produced at those mills is shipped to various points; some of it goes to California; about sixty per cent goes east, which is shipped by rail. The annual freight paid on lumber shipments is about $1,250,000. The estimated shipments of fruits, lumber, canned goods, vegetables and other products out of Medford for 1928 is approximately 9,700 cars. Outside of the fruit, ninety per cent of it goes to eastern destinations; of the lumber about sixty per cent; this year's canned goods, most all of them will; and the vegetables and other items will practically all go to coast points.

1130

As to the incoming freight into Medford in 1927 and 1928 (2078): In 1927 there were 3,154 carloads; the first seven months of 1928 there were 2,455. That freight had wide distribution; some of it came from the East, a good majority of it came from the coast. It would be very hard to determine what percentage of the inbound freight came from the coast. I would say, just as an estimate, about one-half of it; maybe a little more. Oil and gasoline shipments into Medford come from the oil fields of California and are shipped to Portland by boat and then come down to southern Oregon via the Southern Pacific.

In stating that vegetables would probably all go to the coast, I had in mind such vegetables as cabbage, peas, beans, carrots, beets (2079), squash, cucumbers, and so forth, that are marketed here in Portland or in California. There probably is a substantial market for those products in the Middle West and East, but owing to the highly perishable quality of these products, it would be difficult to reach that market over any route. The cross-State line would let us into new territory for marketing that class of commodity. It would probably encourage canning plants, which would carry their products into new territory.

Q. Well, do you know anything about the markets at Salt Lake, Spokane, and other interior points for such vegetables as you mention?

A. Yes; there might be.
Mr. ELLIS. That is all.

CMR. MCMANAMY. Cross-examine.
Mr. DEY. No. Questions.
1131 Mr. SPENCER. That is all. (2080.)

GEORGE W. DUNN was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct examination:

I am sixty-four years old and reside at Ashland, Oregon; I have resided in Jackson County and in Ashland all my life. I am a farmer by occupation and I am also interested in the banking business, being connected with a couple of banks. I was formerly county judge of Jackson County for four years and I am now State senator from my county. (2081.) I have been engaged in the agricultural business practically all my life.

As to the actual and potential tonnage originating in the Ashland district: I have a statement prepared by the secretary of our chamber of commerce. The Ashland district is that district south and east of Talent, Oregon; that is about five miles west of Ashland; the district lays in the southeastern part of Jackson County. There is about 4,285 cars per year being produced, or ready to be shipped at this time. That consists of lumber products, granite, minerals, wholesale groceries, lithia water, mineral water, carbonic gas, canned goods; that is products shipped in, not shipped out. We have canneries in Ashland (2082) and there are sawmills there. We also have several sawmills in the foothills near Ashland; seven or eight altogether, I think nine. There is a great deal of mineral water there. It is not being shipped except in small quantity at the present time. There is water there that would produce practically a carload a day, of lithia water. The gas is being sold in tanks. There are four carloads a month now being sold. It goes on the Southern Pacific, the only way it can go. It goes north and south, is used for soda fountains and things of that kind. It can go in every direction if there was an outlet for it. I think a certain percentage of that goes eastward. The canned goods at Ashland, there
1132 are twelve carloads sold, all to go East for this year's output. (2083.) There is a vast amount of timber tributary to Ashland, east of Ashland and on the plateau south of the Little Butte Brakes, where the Keen Creek there breaks away, divides the territory, and running east to the summit of the mountain, west to the Lake of the Woods and south to Klamath Falls Highway; there is a billion and a half feet of standing timber. In the Keen Creek district south of the Klamath Highway there is about two hundred thousand feet—two hundred million feet of timber; and in the Pilot Rock district there is 40,000,000 feet; at the head of Neal Creek there is about 50,000,000 feet; and on the plateau, or the head-

waters of Beaver, Little Applegate, and Squaw Creek there is about 300,000,000 feet; and in the Ashland watershed there is about 150,000,000 feet; making a total of 2,242,000,000 feet of timber, or at an average carload of 25,000 feet per car there would be 89,600 cars of timber in that district.

In my opinion, the result of a shorter freight haul, or a shorter railroad facilities eastward, upon the development and production of resources of my district, would be that a great deal more of this timber would be shipped than there is at present. At present the mills are cutting white fir because it is light and the freight charges are so heavy they can't afford to cut the heavier timbers. They can get (2084) by with the white fir because it is a very light timber. The Moon Lumber Company is shipping three cars of that kind of timber a day now from Ashland east. The freight rates are practically equal to the cost of the lumber.

W. H. GORE was thereupon produced as a witness on behalf of complainants and, having been duly sworn, testified as follows:

Direct examination:

I am nearing sixty-eight years of age (2085) and am a farmer by occupation, residing at Medford. I was born within three miles of Medford, and have lived there all my life with the
1133 exception of about twelve years. My latter residence there has been ever since 1894. I am in the banking business at this time and president of the Medford National Bank. I have been interested in agriculture practically all of my life. I have had very excellent opportunities to observe the agricultural and lumber resources of my territory, and have been interested in those enterprises for many years.

Q. Can you tell us something about the copper ore of what is known as the Blue Ledge district in your county, the amount available—the amount that has been blocked out there?

A. In the Blue Ledge district there are only 20 developed properties, with an estimated or measured tonnage of perhaps, I will say offhand there is not any doubt—you can verify this by the figures of the engineers who were in superintendence of (2086) the development there, but in excess of two million tons of copper in that immediate district. That is, what I mean to say, copper that is blocked out, ready to stope out, if you please, and load on cars, or make any other use of it.

Comr. MCMANAMY. Where is the Blue Lake district?

A. The Blue Ledge.

Comr. MCMANAMY. With respect to Medford?

A. It is almost due south of Medford, a little west of south. It is on the northern—it is at the foot of the Siskiyou Mountains, the north slope of the Siskiyou Mountains.

Exam. ROGERS. Is it east or west of Ashland?

A. Well, it is west of Ashland. It is northwest of Ashland.

I can give you some idea of the amount of development work that has been done at these Blue Ledge mines—the amount of money that has been expended in the development of the mines. There are many thousands of feet of tunnels, upraises, and shafts. The tunnels are run on three different levels, and the ore body is measured by means of the diamond drill. The drill cores
1134 are assayed, practically every foot of these drill cores, and they are a matter of record in the office of the Blue Ledge Mining Company. The volume of high-grade ore in the Blue Ledge will equal a half a million tons; and when I speak of high (2087) grade ore—the low-grade ore will be referred to as five per cent and below, and there is ever so much more of the low-grade ore than of the high-grade ore. (2088.)

As to the amount of merchantable timber in my county: The State forester gives a figure of 20,600,000,000 feet. My understanding is the State forester gets his information largely from the Federal Forestry Service, and they are constantly amending their figures. The forestry office at Medford gave me a larger stumpage area last week and there are doubtless, according to the figures of the Forestry Service there, 22 billions of merchantable timber in the county, in the watershed; in the valley, in the north slopes of the Siskiyou Mountains, in the neighborhood of five billions additional; and in the southern slopes of the Umpqua on the north and the Cascades on the east, in the extreme northeast portion of the county, more than six billions of feet. It really stands near six billions of feet in Douglas County, and perhaps a half billion or a billion on the west of the summit of the Cascades and east of the Klamath County line.

Concerning the market for the lumber produced in this county: Local demand will consume about 15 per cent of the entire cut of the county. Then we have a demand that goes south largely—we don't ship any lumber into northwestern Oregon—but nearly 25 per cent of our total cut in marketed (2089) through the length of California. The rest of it is marketed in the east, from Missouri River points east, in the Middle West and the East.

Orchard lands may be valued, depending upon the age and development and care that they have received and the prospective capacity of the trees developed, from two hundred fifty for
1135 very young trees, and especially if they are not located on the very best of soils and most favorably located, to a couple of thousands dollars an acre, full bearing pear trees. The fruit crop produced in my valley, is not marketed in the valley. It is pretty hard for us in the valley to get any of our real best fruit produced there. It is put through packing houses there and shipped almost entirely to eastern market, excepting some of our apples at seasons of the year are shipped to Southern California, but that is a small portion of the crop. We have only one outlet, one means of trans-

portation to eastern markets, and they follow the Southern Pacific line. (2090.) Very little of our fruit is shipped north. We depend upon the service of the Southern Pacific Railway Company there and they furnish the empties and usually haul away our fruit by the southern route, usually distributed through the Ogden gateway. Much of this is shipped south, and the portions that are shipped into the Southern States go south through El Paso and are distributed from there; reaching the western and eastern markets most of the fruit is shipped through Ogden.

Exam. ROGERS. Do you know whether the shippers route their own freight or not?

A. Well, the shipper has a right to route his own shipments, without doubt, but he hardly has the privilege at that for it. As I said a moment ago, we depend upon the service of the Southern Pacific Railway Company out there and the lines—the sidings are lined with fruit cars, the Pacific Fruit Express, through all that valley right now, and I don't think that the people—that the producers there have availed themselves of any right to route their shipments, for it isn't—it is hardly practical under the conditions that exist.

Exam. ROGERS. Well, what do you mean?

1136 A. Well, that the tonnage originates on the Southern Pacific—in Southern Pacific territory—that is, there is no other (2091) railway that touches us, and we can't reach any other railway excepting over the Southern Pacific line. Now, I don't want to put this up to any criticism of the Southern Pacific transportation company—I think I would probably conduct the business the same way if I were it—but it is impractical for a shipper of fruit in southern Oregon to attempt to route that fruit by any other routing than over the Southern Pacific line, and that goes south, and so the volume of our fruit goes that way.

Exam. ROGERS. Well, what would happen if you routed it—if the shipper routed it through Portland?

A. Well, I don't know. I don't think he would continue the practice if he happened by chance to route some of it through Portland.

Exam. ROGERS. Do you think——

A. The other routing is the—the Southern Pacific Railway originates their fruit. They don't turn much of that traffic to any of these lines up here. I think we depend on the Southern Pacific Railway for service. They are giving us service and we are giving them our business from force of circumstances.

Exam. ROGERS. Well, they would have to turn it over if you routed it by Portland.

A. But then we don't pursue that. That has been practiced in a limited way, but it isn't generally practiced. (2092.)

The pear production in my valley is sure to increase, as it is increasing at the present time. Within the next five years we will

be producing more than double the tonnage of pears that we are at the present time. That list that has been filed here, I don't
1137 know just the number of trees shown on it, but you will find that the trees are well selected now, and these are the varieties that have been tested in the markets, and the young pear trees in the Rogue River Valley are of the most acceptable varieties and largely winter pears, the winter fruit that has been the most acceptable in the markets commands the largest price and the widest distribution. As I said, there is no doubt that within the next five years we will be shipping twice the tonnage of pears that we ship at this time, and many tracts are being planted at this time to pears, and it requires some years to produce any fruit from a pear orchard. When they begin to produce depends upon the care of the orchard, but the seventh year they will begin to produce a little, and at the age of perhaps sixteen or seventeen, they are in full production. They still increase in productive capacity after that period. (2093.) The planting of pears on a commercial scale in my valley began soon after the event of the O. & C. Railroad into that region in '85 and '86. We had some considerable orchards in the valley at the time that the Southern Pacific, or the O. & C. Railroad, built in there, and the railway for the first time in our experience provided a cash market for all the fruit that we had that we wanted to sell; that was shipped to Portland. That line wasn't completed over the mountains south. The new plantings began immediately, because it seemed to be a productive and profitable enterprise. In those years we weren't troubled with any of the what are known as pests or the difficulties confronting the fruit grower. All we had to do was prune our trees and cultivate them and harvest the crop.

Before the railroad came in there, the business was largely a process of barter and trade. I was a young fellow at that time, and recall that from an orchard my father had planted in '62 or '63, he exchanged apples and pears for every known product in
1138 the whole region; he traded apples for shakes, for shingles, calves, pigs, sheep, horses and a sewing machine, and to that extent fruit and the other commodities were legal tender of the country. We would exchange (2094) fruit for grains.

Exam. ROGERS. Mr. Gore, do you understand what is asked for in this case, in this complaint?

A. Well, I am answering the question asked me.

Exam. ROGERS. That is all right.

A. Yes, I think I understand it.

Exam. ROGERS. What do you understand it to be?

A. I understand the point aimed at in this petition is to arrive at a conclusion whether it is expedient or necessary to build a cross-State line from the region of Burns to some point on the west—I don't understand that the commission—that State commission in their petition would fix any definite point; but I am familiar with the wording of that petition, that it terminate at

Odell Juncton, or some point, some more desirable point convenient south of there. That is ——

Exam. ROGERS. And how do you figure that that is going to help you in Medford?

A. Well, I think that my last statements here in regard to what one—the introduction of the Southern Pacific Railway, or the O. & C., into that territory—it produced a market, it enabled us to turn our stuff. Without transportation we were absolutely cut off from the usual means of the transaction of business. Now, we are to the same extent limited at this time. The two considerations, the elements, if you please, in commercial transportations that are most important next to cost (2095) of the transaction is the time, the distance and the time involved in the completion of the transaction. I would like to direct my—whatever testimony I have to offer,
1139 to this one point, that while it is possible for us under present conditions without any other railroad to ship some of our products, a limited portion of our products, to market to dispose of them, to distribute them, if you please, that a cross-State line that would shorten our line of transportation to our potential markets would enable us to ship so much more of our stuff and so much more expeditiously, that the construction of this line would be justified in our behalf alone; we can produce tonnage enough down there to justify the construction of the road. That is what I would be aiming at.

Exam. ROGERS. Do you think that the shippers would route their shipments that way—going back to your remarks a few moments ago?

A. Yes; with the completion of the direct line I think they would; it would be optional with us then by what routing we would ship our fruit and our other products. I don't mean to say that we do not enjoy that option at this present time, but it isn't practical, the shippers cannot pursue the practice of routing their products over any other lines. There is this misfortune, the petition would seem to end this railway construction at Odell Junction or some place south of there along the line of railway transportation and then out, but in (2096) line with the first presentation of this matter to the commission, report by Mr. Newell, he himself admits that that road could not be built—this is his own language; I probably can't give just his language—he said that road cannot be built if it is to terminate at Odell Junction without provision for reaching the tonnage of western Oregon. Now, western Oregon in that petition, I think, means northwestern Oregon, for in all the discussion of the matter southwestern Oregon has hardly been mentioned. We admit that we are far from the center of things in Oregon, but at that we are in this position in southern Oregon, that the State or the Inter-
1140 state Commission or the Almighty or somebody else must come to our relief or we have reached, almost reached, the limit of our development along certain lines. The fruit will bear shipment, as was remarked by one witness that preceded me. We can

ship the highest grade products, for they will bear the investment, and the care, and the time and the effort, the cost of production, preparation for market, and the transportation, but we have a large area there, much larger than it appears to be on the map, a very productive region agriculturally, very productive of timber products, and I think—well, I don't need to think—I am well informed, and feel assured that the great tonnage to be produced in that region is mineral tonnage.

Comr. McManamy. Some reference has been made by previous (2097) witnesses to the extent of the Butte Falls line, what they think the possibilities are with respect to that.

A. Well, it probably isn't up to me to think, your Honor, but I believe that I see evidences that that road is being projected.

Comr. McManamy. Well, your thought as a representative citizen of Medford will be very helpful to us. I would be glad to have you give it.

A. Well, that is the general feeling down there, and the people of the entire region—I had—I haven't met anybody, with the exception of I was talking with three gentlemen the other day, and they wanted to know what would be the effect of this thing if the commission should issue an order for the construction of that road, what effect that would have upon the Great Northern building in there. Now, all people are not—"I don't know what the effect would be." I said to them, "and I don't care very much." We have plead and cajoled with every institution in the transportation business to get them to give us a little more and a little better transportation facilities, and we appeal to the Interstate Commerce Commission to
1141 just take into consideration our condition down there. We believe, and we are hopeful, that the operations that are now being carried on in railway construction between Klamath Falls and Butte Falls will result in the end in the completion of (2098) a connection that will give us some sort of means for a more direct eastern outlet.

Exam. Rogers. Is that what they proposed to do, to open Butte Falls to Klamath Falls?

A. Well, that is—the indications at this present time from the operations of railroad construction would seem to indicate—and I can't say that I am informed; I am not on the inside of either of those companies that are doing this construction up there—it is purely imaginary, I suppose, but the indications are that the one is building into the other, and I know that one of them—or at least I am informed that one of them—has timber south of what would be the necessary terminus of the other's line if he built far enough north to get on to his timber; they are going to have to build right by one another there in order to get to their own timber.

Exam. Rogers. Is the construction of the Black Butte—or, rather, the Butte Falls—line certain enough, in your opinion, that you would make a loan predicated on that as insurance that you would get your money back?

A. Well, I would regard it as a [illegible] loan, I will admit, if I was making a loan on that number.

Comr. McMANAMY. We will suspend until 1.30.

(Whereupon, at 12.30 p. m., August 16, 1909, a recess was taken until 1.30 p. m.)

After recess (1.30 p. m.)

(In the absence of the Witness Gore, proceedings were resumed as follows:)

1142 DR. J. F. REDDY was thereupon called as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

I am sixty years of age; have resided in Medford, Oregon, and Jackson County for twenty-three years. I am engaged in a great many lines—mining, farming, railroading (2100) and in 1907, I think, I was mayor of the city of Medford. At one time I was interested in the construction of a railroad from Grants Pass toward Crescent City; originated the idea of the building and built a railroad; which I operated, I think, for about a year. I am familiar with the construction of the Pacific & Eastern Railroad from Medford to Butte Falls; I built the first ten miles of it and then sold it to the Hill People in 1910, I think.

I am very familiar with the mining, mining of all kinds, in Jackson, Josephine, Siskiyou, Del Norte, and Douglas Counties. The particular benefit in the development and marketing of copper ore in this particular section of the country by the (2101) building of a railroad from Crane to Odell: It would vitalize the mining industry in those counties; start them up and they should function, where they cannot now. As to the probable tonnage of ore that might move eastward over the railroad: The district that we are talking of now, known as the Rogue River Valley, has more tonnage developed, more diversified mineral tonnage developed, than any portion—or any mining camp in America ever developed prior to getting rail transportation. There is no mining camp on this continent that has ever done so much prospecting and developing and produced so much tonnage as that district and spent as much money. There has been over ten million dollars spent on the copper mines alone in that district. Tidewater is the big market for copper; the transcontinental railroads is another and the smelters and smelting points like San Francisco, Tacoma, or Butte are also markets for the copper.

1143 As to the proposed extension of the Pacific & Eastern from Medford to Klamath County, I would say that if the commission would order somebody to build the Crane-Odell Road that probably in ten days the question of building that would be settled. It would be very desirable, and a very (2102) easy matter to finance. It would encourage the present owners and probably double the value of their assets, if they had a cross-country road, or had some other system of transportation other than the system they have at

the present time. I think they figure that if they have assets of five million now, this new system would probably mark it up to ten million.

Exam. ROGERS. You figure, do you, Doctor, that it would move across this new line to the Southern Pacific, and up the Southern Pacific to the cross-State line, and then across that way?

A. Yes. The timber on the coast, the redwood, would seek and go east via this projected line. This redwood would require extension of the Grants Pass-Crescent City line into Del Norte County where the redwood is. As to the effect of this cross-State construction upon the construction of that line from Grants Pass towards Crescent City: (2103). I am dealing with some people who are figuring on building this Grants Pass-Crescent City Railroad, and I have an option from the city of Grants Pass for a portion of that line. The city does not own it, but has an equity in it. Twohy Brothers have legal title to it and the city of Grants Pass has an opportunity to accquire the property from the Twohy Brothers if they pay them so much money. There is a suit pending in court over the matter of Twohy Brothers tendering it back to the city of Grants Pass.

I am interested in the construction of the Grants Pass-Crescent City Railroad, and if there were any assurance this cross-country railroad was going to be built that would practically settle (2104) the financing of it, providing the commission would permit 1144 them to build it. It is building into Southern Pacific Territory, and it would be a problem getting the certificates from the Interstate—The redwood timber owners claim that, and they go on record by evidence put up to the Government in some hearings formerly held, that more than 60 per cent of the redwood timber would seek the Middle West States, Omaha, Kansas City, St. Louis, Chicago. The redwood market, I think, is only taking care of lower California and Texas, and recently it has gone into Louisiana. You have in the room here, one of the best posted men in the country, a man that has been engaged in that business a good many years, and could give you more accurate testimony on that subject than I could—that is Mr. Owens. I am quoting the owners of the timber; whom I have been dealing with for the last fifteen years, and the statements I am making are statements that I have used a great many times in trying to induce capital to build this railroad.

In a general way my idea as to the benefits accruing to Southern Oregon and Del Norte (2105) County from the construction of this proposed line from Crane to Odell: It would liberate the people there. That country is the worst bottled-up from a railroad standpoint of any portion of the United States. There is no portion of this continent that is suffering so much from lack of transportation as that country known as the Rogue River Valley.

Exam. ROGERS. Doctor, let me get this straight, going back to your testimony a little while ago—Is it the so-called Stevens' survey

that you think would be followed from Butte Falls east to get to the cross-State line at present?

A. No; I think that they would go back down to what is known as Little Butte Creek on the map there and follow up Little Butte to Klamath Lake, the upper end of the Big Lake, and then cross over to—the Stevens' survey doesn't—I don't think they would
1145 use the Stevens' survey. I think they would come back to Butte Falls. The road is about ten or twelve miles beyond Butte Falls.

Exam. ROGERS. That is the territory that you thought there wouldn't be any difficulty about building across if the cross-State line was constructed?

A. Yes; I took Mr. Stevens across the country originally—that is, the route that the survey made. (2106.)

Mr. ELLIS. Along the same line, with reference to the survey from Butte Falls to a connection with the cross-State line, where did you have in mind the probable point of connection with existing lines, or with the cross-State line, established on the east side of the Cascades?

A. At Fort Klamath I think the Stevens—you see, the Hill people surveyed a road from Biggs, Oregon, to Medford, Oregon—from Biggs to Bend, and from Bend to Medford, and started to build originally from Medford to Bend, and shortly after started to build from Biggs to Bend, and the projected line at that time was at what is now known as Kirk, I think—Kirk or Chiloquin, or in that locality—across the upper end of the Klamath Lake.

I am familiar with the principal characteristics of that territory that would be traversed by the proposed extension of the Butte Falls line and there are no difficult physical barriers. The shortest distance by which a practical route could be constructed between Butte Falls and a connection with the Natron cut-off now would be the Stevens' survey—or from the end of the Butte Falls—or the Pacific & (2107) Eastern, which would be about thirty or thirty-three or thirty-four miles, and I think they would have to build about close to fifty miles by the route I think will be followed.
1146 The construction of the line would open up new territory that is heavily timbered and would justify the building of it.

As to the other sections of the State of Oregon, other than the one in question, I have travelled a great deal in Oregon and especially the eastern and southern part of it, and I don't know of anything that would help the State so much as the building of a cross-country line. I don't know any one thing that could create so much commerce, business industry, and change the complexion of the State as this cross-State line. The State is very backward. The other States south and north and east are growing, but Oregon doesn't seem to. It has got an awful black eye. Take the mining people, (2108) the copper mining people, while they have spent ten million dollars in southern Oregon, you can't induce any of them to come in. Lots of

the biggest copper men in America have had their money invested in southern Oregon for ten, fifteen, twenty years, but it is locked up there due to lack of transportation. They assumed when they went into these various projects there that if they developed them to a certain point the Southern Pacific would furnish them transportation. The history of the Southern Pacific will show that it has never furnished anybody transportation and doesn't at the present time. An analysis since the road has been completed will show they have never built any feeders for anybody, and have only initiated one or two lines, issued from an economic standpoint, not from a public demand. The present feeders were built by other people and after proven and shown to be good things were taken over by the Southern Pacific. I am referring principally to the branch lines in southern Oregon and Northern California (2109) as the Southern Pacific does not own any branch lines south of Eugene, Oregon. There's two or three feeders there, like the Pacific & Eastern and the Grants Pass, but they had nothing to do with the building of those roads;
1147 they were built in spite of them and have proven to be good things for the community and for the Southern Pacific Railroad.

In stating that my community is badly bottled-up (2110) I had in mind the country between Eugene and Chico, California, which zone has but one railroad. The country between Eugene and Portland has three railroads, I think, and a river and the country between San Francisco and Chico, California, has three railroads, competing lines, and the Sacramento River. The competition stops at Eugene on the north and at Chico on the south, and that strip of country, I think, is about three hundred miles long and has only one railroad. The people who live in that particular zone pay a higher freight rate than is paid in any other part of America, and in addition to that the development of the country is retarded and people are kept out of the country. It is practically impossible for anybody to engage in any line of business, farming, fruit raising, mining, almost any line of human endeavor and to compete with people outside of that zone. It is necessary to have a superior article, produce a high grade article, stand the high freight rate, be very selective and know his business to go into that zone and compete with the fellow who lives out of the zone (2111).

Cross-examination:

I know that the Southern Pacific Company has in the last fifteen years spent quite a little money in the construction of railroads in Oregon but they have spent very little at the request of the people; all the money they have spent is for the settlement of the Southern Pacific; and the public they are serving and that keeps them alive are not considered with these improvements. I can give you the history in detail of every mile of road they have built and the approximate cost. The Tillamook line to the coast was of benefit to

Tillamook County but the Southern Pacific Co. didn't initiate it; (2112) but they didn't propose to build that road (2113).

1148 Mr. Wiltsie and MacArthur-Perks were associated together, and started to build a road from Eugene to Coos Bay. A few weeks after they started, the Southern Pacific started a side line, started to run them out of the country and bluff them. They found out they were strong financial people and bought them out. The MacArthur-Perks wanted to assure the people that the railroad would be finished in the event they sold out and I think the contract between them and the Southern Pacific compelled the Southern Pacific to give MacArthur Brothers a contract to complete the road, and under that arrangement the Coos Bay railroad was finished. It was a case of where they just wanted to keep somebody out of their country, and were forced to do something that they might not have done up to date if they hadn't been forced to do it.

I got this information from Mr. Wiltsie, the promoter whom I know very well, and I was helping him at the time he engaged in that; I got some of the story from Judge Twohy, who was authorized to go into the field and build a road, a side line to MacArthur-Perks' road and Mr. Boschke, chief engineer. (2114.)

The Southern Pacific has lines projected all over the country that they are not serving at this time and if you try to beat it, they will spring the survey on you. They did not initiate the Tillamook branch; they built it. When the public try to work out their own salvation and they see the public are annoyed, and are going to do it anyway, they oftentimes step in and do it. That is the history of the building of railroads in Oregon, by the Southern Pacific. They have built a great many roads. They built the road into Klamath Falls. The citizens built 90 per cent, then Mr. Harriman bought it and built a different and better line and since that Southern Pacific has built a new line and spent ten or twelve million dollars in the reconstruction of the line the citizens initiated some ten or twelve years ago. I refer to the old Weed road. There was

1149 another one building in at that time that Mr. Lindley built. (2115.)

I think Mr. Owens would build the line from Butte Falls to a connection with the Cascade Line of the Southern Pacific, and if he didn't, probably the Hill people would be the logical people to do it. They are familiar with it and owned it at one time.

Assuming that the people I expect to build this road do build it for the purpose of hauling a portion of the Rogue River traffic over the Cascade Mountains and within a few miles turn it over to the cross-State line, I assume they would have some working agreement or some interest in the cross-State line.

Q. You don't think they would deal with it just as they deal with several thousand carloads of lumber every year, take it down the Deschutes Canyon and then out to Portland or Seattle, and then on east?

A. I think that a railroad company that could get a cinch on (2116) that freight and shut all the other competing lines out I think would do it. I don't think that——

Q. Well, what is the extent of this cinch? How long a stretch of haul would they have?

A. They wouldn't have to haul it very long, because it would depend a great deal on where the freight originated. If they owned the road on which the freight originated, I think it would be a great advantage.

Q. Why?

A. Well, it seems that there is an unwritten law or custom or a habit of the fellow that originates the freight, or owns the line on which it is originated; he has some advantages that the other fellow hasn't got.

Q. Then if your Great Northern, which now reaches Klamath and has trackage rights on the track with which your Butte Falls line would connect, would get its hands on this traffic over in your
1150 Rogue River country, it would no doubt hold onto that traffic as long as it could, wouldn't it?

A. I think that is human.

Q. Yes; and it wouldn't get onto the cross-State line at all, would it?

A. It would have to.

Exam ROGERS. Where did you have in mind that this traffic was going, Dr. Reddy?

A. Well, it would go—assuming, now, if the Southern Pacific (2117) complete their Modoc Northern, it would go east from Klamath Falls. If the Hill line could take it on down to Bend, down the Deschutes—that is, the Northern lines—if the cross-country road is built, if it is built by the Hill or Northern Lines, they would naturally try to divert it on their line.

Q. (By Mr. DEY.) Well, you haven't heard any one suggest that the Northern lines were going to build this cross-State line, have you?

A. Well, I think they are party to the suit here, if I understand it.

W. H. GORE thereupon resumed the witness stand, and testified further as follows:

Direct examination—Contd.

At adjournment time, I had not finished with the answer I had in mind with respect to my certainty as to the construction of the extension from Butte Falls to a connection on the east side of the Cascades (2118). I seemed to indicate a little reticence in saying how much I would loan on the certainty of the Butte Falls road being completed. I don't need to refrain from expressing my conviction that in case the cross-State road were to be constructed now and operations begun at once, the Butte Falls extension to connect across there would be completed before the other. I think it will be anyway, whether the other road is built or not. I am con-

1151 vinced of that. I have invested some money on the strength of my confidence in that.

I have knowledge of conditions all through the western portion of Oregon and to a certain extent through the whole State. My business has been for thirty-five years (2119) in the southwestern part of Oregon which has been my home. I attended four session of the legislature as a member of the house of representatives, which office, through my attempt to develop the country, which was centralized in the region north and east of Fort Rock and is commonly referred to as the Fort Rock Valley, has brought me in contact with the so-called high desert of central Oregon. I had something to do with the appropriation of $10,000 by the State of Oregon, under the advice of the head of the State bureau of mines and geology, indicating their conviction that water could be developed in a large area in the Fort Rock region and brought to the surface without even the use of pumps; that artesian water might be developed and (2120) money was appropriated and expenditure under it was committed to the State bureau of mines, under the administration of Mr. Henry M. Parks, who was then the head of the bureau of mines and geology in the State. Four wells were drilled, an average depth of 250 feet, and their water supply was to that extent tested.

I have examined those wells and seen them in operation for 26 consecutive hours, though not constant operation. I had been a party to the appropriation of the State's money for the purpose of investigating the practicability of developing the Fort Rock Valley, through the use of pumping and irrigation, and I noticed that in all of those wells, the water arose or stood at a level of 18 to 28 feet below the surface of the ground, dependent upon the altitude at the point at which the well was driven and in every instance the water seemed to maintain a constant level, after the first half second or probably a quarter of a second, the pump had been in operation. The water was lowered from 11 to 21 inches and stood there for 24 hours without changing a quarter of an inch——

1152 There isn't any doubt in my mind that the land may be developed and successfully farmed in the Fort Rock region, in the event rail transportation is made available. I have had some experience in farming and believe the Fort Rock Valley will be made a very productive region by comparison with the Fort Klamath Valley, the Wood River Valley, which were as desert as any part of the Fort Rock Valley. Water has been applied to the Wood River Valley and they have 18,000 acres of lawn, green the season through. The country is devoted only to the production of forage grass, pasture and hay. I visited this country again last fall and went pretty much over it, and I have seen the effect of irrigation on the land where it has been applied. (2122.) A little further investment to apply water to the irrigation of the surface is all that is needed.

As fine, as nice a stand of alfalfa, as prolific as you would see in America, you would see in the midst of the Fort Rock Valley.

I am not so familiar with the Christmas Lake Valley as with the Fort Rock, because the experiments have been made in the Fort Rock Valley and not the Christmas Lake Valley. My opinion is that Christmas Lake Valley would respond to the same treatment, however, and I don't know why my opinion shouldn't be as good as that of any other men who haven't had any more experience than I have, but geologists maintain that the same conditions maintain up there, it is practically on one altitude, about 4,400 to 4,500 feet elevation.

The effect upon the development of the State of Oregon, as a whole, resulting from the construction of the cross-State line in my opinion would be the certain development of the Fort Rock region into a rich dairy region, or if preferred, the greatest region for beef cattle. Our (2123) ranges south are devoted to the grazing of cattle and fattening of same. The Fort Rock region is well adapted to the production of alfalfa seed and none of the diseases or difficulties are confronted there. That portion will be made a productive
1153 area, and the chief benefit to our country will be the outlet for many of our products that are sold in the North and Northwest and will give us a direct routing east.

I had confidence to come before this body to offer evidence because I have the fullest confidence that the line will be constructed due west of the terminus as it has been indicated in the petition, and the thing that has directly concerned me is a larger commercial opportunity, larger commercial importance and the converting of our national resources into marketable products. The miners have an expression concerning ore: There is only one kind of rock that is ore. Ore is rock that contains enough mineral of some description to pay to reduce it and extract the mineral from it. The major portion of these mineral desposits in southwestern Oregon at the present time are just simply so much rock. It was truthfully testified this morning that in the Gray Eagle Mine, according to the statements of the engineer of that mine, that ore ran $6.00 per ton average in gold, and a dollar and a half silver, besides running from five to twenty per cent copper. Our difficulty of getting our stuff out, prevents our realizing these values and making them useful to about sixty-five million instead of about sixty thousand population, who want our product. Our success and the development of our country commercially is in getting in touch with those regions and facility to deliver to them our products.

Cross-examination:

The Mr. Parks I mentioned is Mr. H. M. Parks that used to be head of the Bureau of Mines of Oregon, and whose place is shown in Exhibit 21, and who (2125) is promoting development in the Fort Rock and Christmas Lake Valley. The money that the legislature put up was used to dig three or four wells over there and he is keeping pretty close tab on what is being done here. (2126.)

1154 I am quite sure there isn't a well on his place. If those witnesses who testified that it was on the H. M. Parks place are correct, then I am mistaken. I know the property referred to. I am producing about a thousand tons of alfalfa per annum, and the most I have ever raised on my premises is 3,200 to 3,500 tons. I am raising about one third of what I formerly did, and to make it profitable (2127) anybody should have $15.00 or $16.00 per ton on the car at Medford, as under present conditions it costs approximately $3.50 per ton for preparing for stacking and cutting; the reasonable estimate of tax on the land that produces that hay is not less than fifty cents per ton; the costs of production are not less than $4.00 per ton. Most of the farmers pay no attention to their tax, and only count the cost of the men: Two and a half a day and board. I can't do it that way, for I have to pay the cost of them, so if I should have a net to me value of $7.00 per ton, I should be able to realize eleven in the stack. It costs us $3.50 to have it baled, that's fourteen and a half. I hire the truck line of Medford to load that for me on the cars; it costs me a dollar and a half. I use my own truck, employ my own men in the hauling of it, and it costs me a dollar and a half per ton. This would allow a fair profit of $7.00 per ton.

As to who I expect to build the railroad from Butte Falls (2128) to the Cascade line of the Southern Pacific: I am rather expecting those who are building it now to do the major portion of it, but if any of the transportation companies would like to undertake an independent undertaking of their own, we will give all the testimony possible in evidence of the fact that that is a convenience and company to get a certificate, if it is possible for us to do it, but necessity for the people of southwestern Oregon. We will help any we believe that the people who are now engaged in the building are going to complete the most of that road.

1155 I will admit that some years ago I had some faith in the prospect of the Great Northern people to come over in my valley, and since the first of May they have been down to Klamath Falls over the Cascade line. If the Southern Pacific built that line over there it would do good from a competitive standpoint. (2129.) I think it would be well for that region to have competitive transportation interests. I made the statement this forenoon that I wasn't so much concerned with who built that road as that it be built and operated. The Great Northern is the one that is closest. I would welcome competitive railroad service in the Rogue River Valley individually and the community would largely do so. If the Great Northern built it, I think it would be the best-paying road they have if there is any opportunity to get the traffic to relieve the pressure on the east side of the Cascades and take it further east. (2130.) There would be considerable industries established that they could get to without any question.

I think to assume they have an investment of six or seven million dollars coming across there is an exaggerated price for building that

road, and I didn't represent that; it was somebody else's representation. I know it won't cost that. It will not exceed thirty miles of construction. The worst of it is constructed already, and they are near enough to the summit so that the major portion of the heavy construction is already (2131) completed. I am pretty well familiar with the country through there. The grading is heavy enough, but it is on the line of the John F. Stevens survey for the Great Northern Railway. The grades are over two per cent; part of it can be modified, but it will cost money to do it.

Q. Yes; well, say it costs them five million dollars, and they have got their investment in the Klamath line up to Bend, their investment down the Des Chutes and all the way east—now, if
1156 they come in there to furnish you that competitive transportation, you wouldn't expect your shippers there in that valley to treat them any differently than they are treating the Southern Pacific, would you?

A. I am not testifying to the solution of the traffic arrangements between the different transportation companies. I will admit without any question that I am not an expert on those matters, but I don't have to be an expert in those matters to (2132) know that a competitive line of transportation in there leading to the east is going to provide an outlet for tonnage that we are at this time not able to ship.

Q. Well, I am not challenging that statement, Mr. Goer, in these questions; I am not asking you as an expert, but as a business man, and a man experienced in that district, and a shipper from that district, and a banker who has had contact with all the business elements in that district for the past thirty odd years—I am asking you, in view of the testimony you gave this morning that your people didn't exercise their right to route traffic against the Southern Pacific—there are good reasons why they didn't, I assume——

A. Yes; that is the practice that has uniformly obtained, and it is far more likely and would be a practical business proposition, for the shippers to route their traffic over their rails to the eastern destinations that they serve, should any other competitive line be induced to come in there. (2133.) They will not necessarily route them via the Great Northern Railroad but by the road they prefer to ship over, taking into consideration time and distance, and price to the point of destination which is all over the east and south. I am speaking of fruit—pears, but if we had a line east we could ship more carloads of lime alone than we ship of pears. Lime and silica products are in demand, but just now our cost for transpor-
1157 tation enables shippers of lime from Bellingham to deliver it into Klamath Falls as cheaply as we can sell it and deliver it from the Rogue River Valley (2134), but if we had a direct line over there, our lime would meet all the demands of that entire section of the country, among others, because our lime is in demand; it is practically one hundred per cent sure. The lime plants are in eastern

Oregon at Lime station on the Oregon-Washington Railroad & Navigation Company, but we are going to ship our lime wherever they want our lime; at the present time we are shipping our lime to the paper mills of the Willamette Valley; your lime isn't adaptable; they want one hundred per cent lime. Irrespective of our shipments to the paper mills, pears are our principal agricultural commodity and the market for them is chiefly in the north and east. (2135.) Some of them cross the ocean to Europe, and if we understand that this line that you are indicating should be built by the Union Pacific, the Great Northern can't compete in time, can't compete in distance.

Q. Some of these people compliment the Union Pacific by wishing that cross-State line on them, and I am assuming that that would be the road for the purpose of the question, and I am asking you whether you would divert—or your people would divert that fair tonnage away from the Great Northern Railroad if it built into the valley, with the shipments destined to New York City and London?

A. I don't believe that any intelligent man will say that all of the pear shipments from the Rogue River Valley, if we had three equally important lines, that all of it would be shipped over any one line, but I am in a position to say, from a very (2136) good reason, that fifty per cent of the pear shipments would be routed over that line, because the saving in time and distance contribute to cost, and these are essential elements in every commercial transaction. We know the distance you have to cross to Odell, or whatever is the terminus, is that much further; the Union Pacific line will be the
1158 most direct line east by not less than two and a quarter hundred miles, and probably more, from the junction there of the Great Northern and here; from the cross-State line to our place. This is largely a question to be solved by the individual shipper in the end. I do not anticipate that the Modoc Northern will be the only means that is provided to shorten the distance east from Klamath Falls. I believe there is something else that will shorten the distance just a little more than the Modoc Northern will, however, we are pleased to (2137) see the Modoc Northern completed. You are working on that and if we can get this line across here at once we will have direct communication with the east. I believe I fairly represent the sentiment of the people of my valley—my town, and we haven't any favorites, particularly, among the railway companies. So far as I know the men controlling them are about the class of men that I like to know. It is a question of facilities, and one of the important features at this time is the origination of traffic and of car services and supply.

We have daily contact with the agent who is serving us, and this results in the routing of the traffic by the line that originates it and by the line that can serve. (2138.) All the billing and routing is done at the local station and an outside line has no equal opportunity and no chance of obtaining the routing of the traffic.

I am talking about the Christmas Lake Valley—the upper end of Fort Rock Valley. It is a great expanse and the Government engineers call the whole thing Christmas Lake Valley. In comparing that with the Wood River Valley, that empties into Klamath River—the Wood River: The Wood River runs there for miles; I imagine fed by the snows of the mountains, as it is rather a constant supply of water, and it is a stream of no inconsiderable volume and has a big flow; (2139) it is one of the principal factors in making
1159 that great inland lake of Klamath Lake, and it flows bank full almost to the surface of the ground, but I have no knowledge of the water in there having been diverted years ago, even by the Indians. A very small part of the Wood River Valley is in the Indian reservation and at this time there is no pumping process or digging of wells involved to irrigate the Wood River Valley. They have all the water they want for irrigation of that (2140) region. In comparing that region with the condition that obtains over in Christmas Lake: My knowledge of the Wood River Valley, from the time I first knew it, dates from when I used to ride after horses and cattle over that region and the major portion of it; was as desert, the same character as the Fort Rock Valley. It is practically the same kind of soil; like volcanic ash. I don't classify it as lava rock soil in the Christmas Lake Valley, it is practically identical with that in the Wood River Valley. I didn't hear the geologist the State put on here testify, but I am familiar with the facts; have known it for forty years or more (2141); have trodden over it and know the character of the soil. It is virtually the same soil and it is volcanic ash.

Q. What do they call the lava rock beds over there?

A. Oh well, there is some of it standing up around there, and we have lava beds over yonder as well in the Klamath region, and it is surrounded with lava flow. This Wood River Valley is surrounded with lava flow, a hard jagged lava rock.

Q. But you think the water——

A. Yes, sir.

Q. Has been there and made the transformation you are talking about?

A. Yes, sir.

(Witness excused.) (2142.)

GLENN IRELAND was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

1160 I reside at Crescent City, California, am fifty years of age; have resided at Crescent City for three years and am a realtor by occupation and am engaged in the real estate business.

The principal industries of Del Norte County are timber, dairying, fishing, and mining. We have three sawmills and a tie mill. The output of lumber of those mills is about 40,000,000 a year from the Hobbs Wall and about 20,000 a day from the other two small mills when they are running. They are not running now, but a (2143) new tie mill has just opened up fourteen miles north on Smith

River, working about ten men. Del Norte County is small and the area of redwood timber covers only 250,000 acres. The market for that redwood timber is San Francisco and I understand they are shipping out to the east, to Missouri River.

Dairying is the greatest leading industry over there. I think they sent out a little over 1,200,000 pounds last year. I think I have the figures on that. I might read this sent to Mr. Harvey from Jack Green, our sheriff of Del Norte County:

"JACK HARVEY,

Portland Hotel, Portland, Oregon.

"Last year, 901 tons, butter to San Francisco; shipped 181 tons of hay from San Francisco and sold at $30 per ton. Grain, 3,000 tons, San Francisco; fertilizer, 20 tons from San Francisco. This year 50 tons from San Francisco general (2144) merchandise for Rogue River Valley by trucks. For San Francisco from Crescent City 30,000,000 feet of lumber last year, over 40,000,000 per year at present rate.

JACK GREEN, *Sheriff*."

We are very much interested in seeing that a railroad gets into Crescent City. The improvements in the Crescent City Harbor has consisted of the Federal Government completing 2,200 feet of breakwater by capping it, and we understand they are going to let the contract right away for the extension, for which we have
1161 $710,000 appropriated by the Government. The Shell Oil Company has built a new wharf there at an expense of about $85,000. We wonder why they built such an expensive wharf just to furnish Del Norte County. Undoubtedly they are looking for some rail transportation to carry that back into the interior. We have about nine or ten miles of logging road that goes from Crescent City out to the redwood timber and the nearest railroad to Crescent City is about 65 miles south to Trinidad and 165 miles north to Marshfield and about 87 miles to Grants Pass. (2145.)

Exam. ROGERS. What do you hope to move through Crescent City when you get your port completed, Mr. Ireland?

A. Well, we have what we call there the mid-Pacific empire, which comprises a territory about 80,000 square miles, about 53,000,000 acres, and all that territory is tributary to Crescent City Harbor.

Now Irving Vining, the president of the Oregon State Chamber of Commerce, made the assertion in Grants Pass about a year ago that out of this territory less than 5 per cent of it is developed.

Now we have another—you were speaking about potentialities; we have another one there that I believe should be considered, and that is we are setting just half way between the Canadian and the Mexican line. We are just half way between San Francisco and Portland, and we have a big lake just about three miles from Crescent City, known as Lake Lindbergh. It covers about 7,000 acres. It ranges about one to forty feet deep. The Government has considered that as an air base.

Now we have had Lieutenant Donnelly from San Diego; Lieutenant Dillon, Lieutenant Wyatt, and all the commanders and captains off of the boats out to look at this proposition, and every one of them says it is ideal. Being located, as we are, just half way, right in the center, and having a low pass in the mountains,
1162 where it would be nearest the base of supplies, we figure that it would be of great importance for the (2146) railroad's insurance alone and for the insurance and protection of the country, to have that railroad come down in there where it would be protected by our boats, our battleships and our airplanes, seaplanes. It seems to me it is a great insurance, and that they could get to the base of supplies in good weather, or at any time, and they are right there to protect them. In case of your defense, if they was off here a hundred miles north or a hundred miles south, it certainly would delay the game and might cause a great deal of trouble in our transportation.

Exam. ROGERS. The question in the back of my mind was whether you were developing the port of Crescent City to move these minerals and things out of this Grants Pass country we have been talking of as moving over by rail across this line. What do you think about that?

A. Well, the Government owns about 80,000,000,000 feet of timber, and the Government is building that harbor, and there is a lot of this timber that ought to be moved now. It is getting overripe. So that is the way we have figured over there, that they will send this timber out through that port.

Exam. ROGERS. Did you figure that these minerals out of Josephine County would move through the port?

A. Well, I should—the way we understand, it would be better; we would get a lower freight rate and it would permit us to move all of our tonnage that is ready now for the market. (2147.)

Exam. ROGERS. Which way?

A. Well, it would go either.

Exam. ROGERS. By water or by rail?

A. It would go either. Very likely a lot of it would go by water and a lot by rail. I should think with this enormous amount of tonnage it would keep the water and rail both busy. There would certainly be an amount go by rail always, which it does.

1163 Traffic, in and out of Crescent City and Del Norte County, up to the present time moves by water and then by truck. There are no existing rail transportation outlets from Crescent City or Del Norte County. We people down there in Crescent City are not content to depend indefinitely into the future solely on water transportation for access to the rest of the world. We are looking forward every day to have a road coming in there so we can get our stuff out by rail. We can get it out more rapidly. Speaking about shipping your fruit, we can ship our fruit, I understand, right to-day New York City consumes 25 per cent of all their fruit (2148)

and vegetables, it is said, from the State of California, and if we could open that big district up there, certainly your railroads would have plenty to do by taking all that stuff right straight across, which they could do so much more rapidly and take good care of it.

We people in Crescent City and Del Norte County believe that the building of the cross-State line from Crane, Oregon, over to Crescent Lake, Oregon, would bring the day nearer when Crescent City might expect to look forward to a rail outlet to eastern markets. I should think that that could be brought right over. We are the only place without a railroad. You can start down here at the mouth of the Columbia River, they have their railroad; Tillamook has its railroad; Newport has its railroad; and so does Marshfield, and on south it is the same way. We are setting in there in a territory that is just crying for rails.

Cross-examination:

It is 87 miles from Crescent City to Grants Pass over our highway route (2149), and is probably the distance that would be traversed by a railroad if one were constructed; might be a little longer and might be a little shorter.

1164 I have investigated the ore that might be developed in Josephine County just in a general way, I know that by reading the house documents that we get, giving the tonnage, is all, maybe. That ore would go to a smelter somewhere; we kind of figure it would come down to Crescent City, we will build a smelter there just for this ore. If we didn't build them a smelter (2150), it is a question whether the easiest way to handle it would be to haul it down to Crescent City and then transship it by boat to Tacoma or to Selby, California, or if they could bring the rails in there they could probably bring it out cheaper by rail than they could take it down and load it and unload it again, with that short haul. I have made no investigation, though, to determine how that would work out.

S. M. Mears was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

Direct examination:

I live in Portland; am engaged in rope manufacturing; the Portland Cordage Company (2151), as president of that company, which is engaged in manufacturing rope and harvesting twine at Portland. I have lived in Portland and been in business here since 1878, and during that period of time I think I have acquired a pretty general familiarity with the State of Oregon as a whole. My company is one of the members of the Portland Traffic & Transportation Association and I am one of the executive committee of that association. I have served as a member of the executive committee of that association five or ten years.

The Portland Traffic & Transportation is composed of manufacturers and jobbers and its general object (2152) is to keep tab on

traffic matters, and when any rate goes into effect, or we think it is going into effect, that would be detrimental to the community, we try to correct it, do what we can to prevent it or to correct it.

1165 Our dealings are altogether with traffic matters. I don't think there are any features of rail or water transportation, and the conditions under which it is afforded, that the association is not interested in, so far as they affect the city of Portland and the State of Oregon. That is, the welfare of Portland we consider—the welfare of the State we consider the welfare of Portland, being the only real exporting port.

The Portland Traffic & Transportation Association has about eighty members, somewhere along there, eighty or ninety, and I think it represents fully 75 per cent of the total shipping, manufacturing, and distributing interests of this city.

As to the various sections of this State, particularly with reference (2153) to their existing transportation facilities and the history of the development of those facilities in a general way, I have this knowledge: That Oregon has no transportation through the central portion. It has the Union Pacific at the north, the very north end of the State, and nothing at the southern end. There is a line up north and south on the west coast, and now it has been extended lately from Bend down to Klamath Falls, so that it gives a north and south line about a third of the way east from the coast. I imagine I have followed, generally, in past years the course of development of the transportation, rail transportation facilities, of the State of Oregon; and have kept myself informed generally with the history of the transportation development of this State and I think we can show the lack of transportation in the State has very much affected the growth of the State. I mean by that, the development of the State. For instance, it will be generally admitted, I think, that the climatic and soil conditions of Oregon and Washington are very similar. Washington State has four transcontinental roads running east and west; the Northern Pacific, the Great Northern, the Milwaukee (2154), and the Union Pacific,

1166 which serves Spokane in the eastern portion of Washington, and also Seattle and Tacoma in the western portion of the State of Washington. I don't think the Union Pacific has its own rails all the way from Spokane to Seattle and Tacoma. If you come down along the Columbia River, you go to the sound, they have a traffic arrangement over to the sound on the Northern Pacific road.

Q. But by that route, that is down through Pendleton and Umatilla and the Columbia River to Portland, and then north, the Union Pacific has a more circuitous route than the other three lines that you have mentioned between eastern Washington and western Washington?

A. They can ship by the Union Pacific, but it has to come down this way to Portland first.

In comparing the conditions in the State of Oregon (2155) and the State of Washington, I was going to say that the mere fact of their having four transportation lines east and west, the mere fact that the State of Washington has developed very much more rapidly than Oregon, it is natural to suppose that the transportation facilities have had a great deal to do with the growth of the State of Washington. That is my judgment and deduction from what I know of the transportation facilities of the State. The greater development in the State of Washington is evident by the growth of all the towns along. I think there are nearly twice as many people in Washington as in Oregon.

As to the comparative extent to which logging and lumbering in the two States have gone forward and been developed, I haven't any information.

I think I am familiar, in a general way, with the subject of this proceeding here; that is, the relief that the public (2156) service commission is asking for. I know that it contemplates the construction of a line of railroad from Crane, Oregon, to Crescent Lake, on the Southern Pacific, across the central or south central portion of the State. The Portland Traffic & Transportation Association
1167 intervened in support of this complaint. This complaint and the relief it asked for was the subject of discussion by members of the executive committee, including myself, a number of times. The reasons that actuated the association in intervening in support of this complaint was the natural inclination of every member there to have transportation developed in the State, because the business primarily depends upon transportation, and not having any development through the middle of the State east and west, we were anxious to see this road built, and we thought we were (2157) justified in asking it for the mere fact that when Mr. Harriman was in control of the merger he had planned an east and west road on this same line and had built as far as Crane. They had also planned one from what they call now the Natron cut-off. That was when the merger was done away with. That was deferred for some time. It was in the last year or two finished. I mean by "it was deferred for some time," that there was no work done on it. I don't know exactly if there was a gap between Oakridge on the north and Kirk on the south, but along the line of the Natron cut-off, whose building was deferred on account of the unmerger resulting from the litigation in the Federal courts. I don't know the exact points between, but that was deferred anyway and lately was completed. The permission to complete it was given by the Interstate Commerce Commission on the grounds of necessity and convenience to the public. If that was the case, I don't see why the same necessity and convenience does not apply going east and west from Natron, and Mr. Harriman was supposed to be a man of (2158) good judgment in regard to transportation matters, and his judgment apparently was that that was a feasible line, and a line that should be built.

I think we were justified in forming our opinion that it was a desirable thing for Oregon, and not an undesirable thing for the
1168 railroad, from the fact that Mr. Harriman sanctioned it during his administration. In mentioning the closing of that gap to connect up Oakridge and Kirk with the Natron cut-off; I consider that the uncompleted portion of Mr. Harriman's project between Crane and a point on the Natron cut-off constitutes a similar gap that ought to be closed.

I have given very little thought to comparing railroad facilities of the State of Oregon and California. I know there are four or five transcontinental lines—that is, east and west lines through California, and that State of course is developed way beyond Oregon and Washington, probably considerable of it due to transportation, but then they have had a good deal more climate to sell than we have, among other things. There is one thing that has influenced me in my belief that the railroad ought to (2159) build this line. That is the fact that the Union Pacific, in the first place, took no interest in the development of central Oregon. They had pre-empted it by having the line at the north and the Southern Pacific at the south. There was nothing done at all until the Oregon Trunk Line commenced to build up the Deschutes, then the Union Pacific got very busy and tried to block, by legal means, and failing in that they built down the opposite side of the river. Before it wasn't worthy of any development at all, but as soon as they apparently felt that the Northern lines might get into this pre-empted territory, they were willing to spend millions in a reckless way to build on the opposite side of the river. In my opinion there was never, or never could be, any justification for two lines of railroad in the Deschutes Canyon. (2160.) What I spoke of this at all for is that they showed at no other time the anxiety to get into central Oregon, or to prevent anybody else from getting in there. Now they should build a road east and west.

While this central Oregon territory has remained undeveloped with rail transportation, the Union Pacific system lines built into the Yakima country and I think, also made their traffic ar-
1169 rangements going over to the sound, and they built out from the sound in one or two places. At the time the Union Pacific built to Yakima and the Yakima Valley, the Northern Pacific had been serving them for years. The Union Pacific built a line about one hundred miles long, I think (2161), into Yakima to get there. The Northern Pacific and Great Northern were serving the Seattle and Tacoma region already at the time the Union Pacific lines extended their service.

Mr. Dey. Mr. Commissioner, I can't see, this is so far afield, that it has anything to do with this case. It does seem to me that within reasonable limits the testimony ought to be confined to the issue in this case. This case is not of large compass, when you get right down to it, and we have listened now to a great deal of testimony, with a great deal of patience on the part of everybody, testimony that has

little, if anything,—in fact, practically nothing to do with this case. We are limited in the number of days that are left to finish our testimony, and I think we are only fair and entirely right in asking that some limitations be put upon this.

Comr. McMANAMY. There has been some testimony introduced with respect to development of Oregon and California, and I think the question may be answered.

Mr. McCULLOCH. That was the last I had on that, but I don't want, in saying that, to apologize for asking those few questions, because one issue in this case is whether the construction of this proposed line will impair the ability of the defendants, or such defendants as may be required to build it, to perform their transportation functions, and I think it is (2162) pertinent on that issue to show very briefly, at any rate, what new construction projects into competitive territory have taken place in the past, while this particular territory has been left undeveloped.

Comr. McMANAMY. Proceed, Mr. McCulloch.

Q. What, in your judgment, Mr. Mears, and the judgment
1170 of the members of the executive committee of the Portland Traffic and Transportation Association, would be the result of the construction of this line of railroad from Crane to Crescent Lake, so far as it might affect the development of the State of Oregon? (2163.)

A. Well, it is bound to give a lot of cheaper land for immigration to take up, which now they are forced to buy higher priced land in the Willamette Valley; and I think it has a tendency to keep a good many of them out. Of course, whatever people settled in there will create business indirectly for Portland and for every other district anywhere near there, transportation companies and all. The potentialities of the section, I presume, are just as great as they are around Bend, and perhaps Klamath Falls, and the railroads feel they can build in there and only do it because they feel there is a prospect of developing the country that will bring in net returns in the end. When the railroads don't want to build in they can always find plenty of excuses and arguments for not building, and then again it is just vice versa, and never any of us know; it is like a new business, you start in a new territory and you don't know whether it is going to be profitable until you have operated it a while.

I don't know of anything more I can say to define and put before the commission the position of the Portland Traffic & (2164) Transportation Association with respect to the building of this line. It would be only repetition of the same thing in different words. In my judgment, I should think the public interest and convenience and necessity would be served if the line were built.

(A short recess was here taken, after which proceedings were resumed as follows:)

Cross-examination:

I testified that this matter of intervening in this proceeding was the subject of discussion on several occasions by our board of directors; we decided that it was advisable for us to intervene in
1171 this case in a discussion at the board meeting. I will be darned if I could tell you what originated that discussion.

I stated (2165) in words to the effect, that the line now petitioned for was a part of the old Harriman survey, and that as Mr. Harriman was a man of good judgment in railroad affairs the program must have been right, or else it would not have been undertaken. That was the foundation for my believing that it was justified from a railroad standpoint. When that survey was made and construction started I was here operating as a business man in those days, in 1906 and 1907. As I recollect it, at that time the two railroads, or systems, the Southern Pacific system and the Union Pacific system, were operated under one management and control, known as the Harriman system. I presume the company that was organized and made the survey across the State was a joint undertaking by those two companies, the line extending from Ontario on the east to Natron near Eugene on the west. From that, there was a branch line projected south to Klamath Falls from this cross-State line, at a (2166) point called Odell. That has been known as the Natron cut-off until now since its completion it is known as the Cascade line of the Southern Pacific.

When I say that nothing was started until the contest to build up the Deschutes Canyon, I didn't say that in connection with the Natron cut-off. It had nothing to do with it. The cross-State line was on two or three years, before the Des Chutes line was started, but I didn't understand that the Des Chutes lines had anything to do with the cross country line to eastern Oregon. It would connect up with the cross country line, extending down to Odell junction, but it wasn't built for that purpose at that time. (2167.) That is, the north and south line, the Bend line, I didn't understand had anything to do with the projected line east and west. When the
1172 construction was started from Natron south and from Klamath Falls north and from Vale west, the two systems, the Union Pacific system and the Southern Pacific system, were under a common management and control. I don't know when dissolution of that merged condition was brought about. I don't want to be tangled up in a lot of details, because I don't pretend to know the details. All I have said is, from the mere fact of Harriman, a prime railroad man, having selected this route across here, there must be some virtue in it and some justification for a layman having the opinion (2168) that that was justified from a railroad construction standpoint. I know, as a business man in this comminity, that there was a dissolution of the so-called Harriman system, whereby the Southern Pacific was dissolved from the control of the Union Pacific. That is a major condition, we all know that.

I understand that when that was brought about the so-called Natron cut-off, or Cascade line, now operated by the Southern Pacific, became the property of the Southern Pacific; and I suppose the original purpose of the cross-State line to get into western Oregon—the purpose of it (2169)—was absolutely prevented, and the cross-State line stopped at Odell on the east slope of the Cascade Mountains.

Exam. ROGERS. How did that prevent the cross-State line from getting into western Oregon?

A. Well, the cross-State line didn't go clear to the west coast; it didn't go clear to the Southern Pacific connection at Natron.

Q. (By Mr. SPENCER.) Well, if it was cut in two and the Cascade line went into the Southern Pacific management and the cross-State line was controlled by the O.-W. R. & N., the O.-W. R. & N. could not get into the western Oregon country, could it?

A. You came in from the east. What are you talking about? You came in from the east to the middle part of the State.

Q. Came into Eugene.

A. No.

Q. The cross-State line?

1173 A. The Union Pacific? You built from the east, west; didn't you?

Q. Yes.

A. That was your intention all the time, to build west until you connected with the Southern Pacific.

Q. Until we got into Eugene. (2170.)

A. At that time it was a joint road, and they wanted the east and west line to cross the State.

Comr. MCMANAMY. I think Examiner Rogers' question was intended to go to the point as to what, if anything, in this dissolution. would prevent the cross-State line from building across the Cascades into western Oregon.

A. I don't know that.

Comr. MCNANAMY. Do you know of anything?

A. I don't know any reason why they could not, either one of the roads, the Southern Pacific or the Union Pacific could have built it.

Q. (By Mr. SPENCER.) Well, you would not build a railroad across there?

A. No; nor would I——

Q. At two or three hundred thousand dollars a mile, would you?

A. Why, just the same as I would build a railroad up the Deschutes.

Q. All right.

A. Didn't you do that?

Q. You could not do it now probably.

A. No; finances are too high?

The WITNESS. Finances are too high. I only cited that as a reason for my believing that the railroads could be justified in building across the State, from the mere fact that Harriman had said that same thing. Now I don't know anything about the details of it. I don't think it is necessary that the Union Pacific ought to do it; it might be a joint road. I know, and every one conversant with the history of it here knows, was a facility that could get into all of these branches and all of these industries at that time
1174 in western Oregon. (2172.)

Q. Take the originating tonnage and haul it across the State, without hauling it up to Portland. Now that was the condition then, wasn't it?

A. I suppose so.

Q. Well, it is not the condition now, and has not been since January, 1913, when the Southern Pacific was divorced from the Union Pacific, has it?

A. No; I don't know that it has. But if you build across the State to connect with the present north and south lines, then you relieve the situation and develop that central part of the State. As to how the cross-State line would be supported without the western Oregon traffic that it was originally built to serve, is really beyond me. I am not in the railroad business. I haven't been over much of central Oregon; not across that line.

Q. No; well, if it is a desert country, without any living water, and without any production for a distance of 100 to 125 miles, with frosts, practically killing frosts in nearly (2173) every month of the year, the cross-State line would not be justified if it was to stop at Odell or Crescent Lake and not receive the western Oregon traffic, would it, if that condition obtained?

A. Well, why won't you receive the western Oregon traffic now if you connect there? You would not be allowed to build without making a traffic arrangement with the Southern Pacific, at any rate, would you? I don't know whether the Southern Pacific route has any traffic through the Columbia route of the O.-W. R. & N. Company now at Portland.

Q. Well, if it does not, and it takes the traffic from Washington County and Tillamook and its branch lines there, and its traffic originating at Portland, and hauls it down through Roseville, California, do you think it would give a cross-State line traffic
1175 from western Oregon originating on its rails?

A. If it hauls to Roseville and Ogden and gives it to the Union Pacific there, wouldn't it be shorter this way with the cross-State line (2174) for the Union Pacific to take and have a long haul on the whole thing? That is the thing you ought to do. I don't suppose that the I. C. C. would allow you to build it unless you first made a traffic arrangement with the Southern Pacific, so that they would give you a fair proportion of the traffic.

I haven't been over the eastern Washington country much, I have been over some of it, and have been over eastern Oregon country

some, and I know some of it is pretty desolate and some of it is
(2175) pretty good. Some of it is pretty productive, Whitman County is the biggest wheat producing county in the State. That is in the Palouse country, which is one of the greatest wheat producing belts of its area there is in the country. The southern part of Washington country towards the Columbia River is very fertile; when you get up north it is not. By the southern part, I mean along where the Northern Pacific runs. Garfield County is productive. I don't know very much about Whitman County or Spokane County, but I don't think the northwest or northeastern part of Washington, north of Spokane, is very fertile. We don't have so many railroads up north of Spokane. (2176.) The territory north of Spokane is not of particular interest or concern to the Portland Traffic & Transportation until we get a differential from up there. In any event, I think eastern Washington is a very fertile country by and large, and I don't know but what eastern Oregon will prove so, too, when it is developed. I don't know so much about that; it is a good deal like the whole of Oregon which in the early days was considered a desert out here.

I don't know if we have any Yakima Valley in eastern Oregon, I haven't been over there to see. Yakima Valley is a very rich
1176 valley; there is no question about that—one of the richest, I guess on the coast. That is the valley that was discussed in direct testimony by Mr. McCulloch and me and the one you built to.

In making the statement that these propositions were a good
(2177) deal like a business proposition, or a business enterprise, it is my notion with respect to this problem of rail service to make as good an estimate as you can; you draw upon your imagination for the potentialities of the country, and so forth; then if you are able to develop them it becomes profitable. You have to be careful that the imagination is not overdrawn and where you are going to spend about eleven million dollars in the enterprise it has a tendency to restrict that imagination. But then, you know, railroads sometimes lose control of their imagination, the same as you did when you built up the Des Chutes; about half of that being a joint line. (2178.)

Exam. ROGERS. Has it been joint all the time?

The WITNESS. I could not answer that detail. I don't know. I don't know a thing about the Alturas line, sometimes called the Modoc Northern line that the Southern Pacific is building. It may have been discussed in the Portland Traffic & Transportation Bureau and I not remember it. My memory is not very good.

Redirect examination:

The Northern Pacific's line built into the Yakima Valley and through Yakima and on to Tacoma, very many years, before the intensive development of that valley in fruit raising and other agricultural and horticultural pursuits began. (2180.)

W. A. CURTIN was thereupon produced as a witness on behalf of complainants and, having been duly sworn, testified as follows:

Direct examination:

My name is W. Curtin; I live in Portland; am secretary
1177 and manager of the Portland Traffic & Transportation Association. Altogether I have had about twenty years experience in railroad and transportation work, the last eight years in the industrial fields, prior to that with the Union Pacific System in Portland here in various capacities. I have been secretary and manager of the Portland Traffic & Transportation Association about six years; the nature of my duties in that employment is to carry out the expressed wishes of the executive committee on matters of importance to the community and to the State, traffic matters. Some of the major features of the work of the association (2182) is to file formal complaints with the commission when they are necessary in traffic matters, prepare and present the testimony in such cases, and to follow up anything that is transpiring in the traffic nature that would be of interest to our members. My work has given me a reasonable familiarity with the rate structures and the existing transportation facilities and transportation needs generally of Portland and of the State of Oregon.

I have prepared some data to illustrate the isolation of this eastern and central Oregon country from Portland, particularly from a rate-making standpoint and in doing that I have selected Crane, Oregon, as a point for the purposes of illustration.

Before starting with them, I want to say this: That at Crane probably there is not material consumption, or not a very great consumption of the commodities I have used in these few illustrations to show the remoteness of that territory from Portland, but it should be remembered that the rates to Burns, for instance, via Crane, are established as arbitraries over the Crane structure, and I think otherwise that the illustrations, whether there is a very material consumption at Crane or not, will illustrate just how far remote that territory is, measured by the rate structure, how far it will go (2183) from Portland, the industrial section.

1178 Crane is approximately 300 miles from Portland on an air line. It is within the third parcel post zone. It is approximately twice that far from Portland, or 558 miles via the shortest available rail route, and far more remote than that when measured by the rates charged for the transportation of freight from Portland as compared with the rates charged from other competing points. If and when the cross-State road is completed via Eugene, the distance to Crane from Portland would be shortened approximately 150 miles. It would be about 408 miles approximately, I guess.

To illustrate what I mean by its remoteness as measured by the rate structure, I want to make a few rate illustrations. For instance, on structural iron to Crane, 558 miles from Portland, the rate charged is $1.31, with minimum of 36,000 pounds. From Salt Lake, 574 miles,

a rate of 62 cents, 60,000 pounds, and 57 cents, 80,000 pounds. From Chicago, 1,955 miles, $1.22, 30,000 pounds, $1.00 a hundred, 80,000 pounds. The rate from Portland is the full fifth class rate, while the rate from the other points are published commodity rates. (2184.) Now, non-intoxicant beverages, from Portland $1.18½, 36,000 pounds; from Salt Lake City 89 cents, 30,000 pounds; from Chicago, $1.21, 30,000 pounds, and $1.05, 50,000 pounds. The rate from Portland is a combination of a 56-cent commodity rate to Huntington, plus a fifth class rate Huntington to Crane. The rates from the other points shown are commodity rates, from Salt Lake and Chicago. On canned goods from Portland, 558 miles, 98 cents on a minimum of 60,000 pounds, and $1.31 on 36,000 pounds. From Salt Lake, 574 miles, 49 cents, 60,000 pounds, and 60 cents on 36,000 pounds. From Chicago, $1.30 on 40,000 pounds and $1.05 on 60,000 pounds. The rate of 98 cents from Portland, 60,000 pounds minimum, is a combination of the 49-cent rate from Salt Lake to Crane. Under the intermediate application of the two tariffs the rate from Portland to Salt Lake will apply to Ontario and the rate from Salt Lake to Crane will apply from Ontario, making a
1179 combination of 98 cents. Now on nails from Portland in carloads, $1.31, 36,000 pounds; from Chicago $1.00 with 80,000-pound minimum. (2185.) Wire fencing, from Portland $1.31 on 36,000 pounds; from Chicago, $1.30 on 50,000 pounds.

Those are carload comparisons. There are a few less carload rate comparisons, too, that I have in mind. For instance, certain articles of drygoods that take in cotton blankets or cotton piece goods in less carload lots from Chicago to Crane, 1,955 miles, for $2.95 a hundred as compared to $2.54½ from Portland.

All of the commodities I have mentioned in these illustrations, and will mention in them, are shipped from Portland, and are commodities that I thought would move into that territory.

Finished leather, in less carload lots, may be shipped from Chicago to Crane for $2.04 as compared to a rate of $2.24 from Portland. Certain other kinds of leather may be shipped in less carload lots to Crane from Chicago at $1.88 as compared with a rate of $2.24 from Portland. These few illustrations show that while Portland is nearer to Crane than the other competing cities via available rail routes, it is more distant from Crane than any of the others if measured by the commodity rate structure, and that Chicago (2186), although three and one-half times as far from Crane by rail, is, under the commodity rate structure, closer to Crane than Portland is.

Crane is a part of the State of Oregon geographically, but is as remote at the present time from industrial and commercial sections of the State as it is possible for it to be. This is also true of a large section of the eastern and central part of Oregon.

We have long desired the construction of the line proposed, and now before the commission not only to correct this condition but primarily because we feel that such a line is necessary to properly develop the territory within the State that will be served by it.

The direct advantage to come to Portland from the building
1180 of the line will not, of course, be as great as the advantages to be gained by the communities and districts directly served, but as the State grows and prospers our city will also grow and prosper. The tariff references for the rates I have quoted are: Union Pacific Tariff No. 3040–B, I. C. C. No. 3789, covers the class and commodity rates from Chicago to Crane. Union Pacific Tariff No. 6045–C, I. C. C. No. 3753, from Portland to Crane. And the Union Pacific Tariff, O. S. L. 2040–I, I. C. C. No. 2568, from Salt Lake to Crane. (2187.) Although the direct advantage to come to Portland from the building of the line would not be as great as to that country itself, and to other sections of the State, the existing disadvantage to Portland would be remedied by the construction of the cross-State line. I believe that the disability is shown by the comparisons that I have cited. In other words, at the present time we are at a very distinct disadvantage in trying to do business with communities such as Crane and in that territory strictly within our own borders, and that would be largely remedied, I believe, by the building of the line across the State. It would bring us closer to the entire territory, allow us to compete on a fair basis, at least, with Salt Lake City and Chicago, and of course in that way we would be greatly benefited. But I believe that we would be greatly benefited also by the development of the territory that will be served by the line, the natural development that would follow the construction of such a line.

Exam. ROGERS. Do you come in contact with various shippers Mr. Curtin?

A. Yes; in Portland. (2188.)

Exam. ROGERS. What is your general experience as to whether shippers route their own shipments or leave it to the carriers?

A. They usually route their own shipments; that is, the shippers who are members of our organization.

1181 Cross-examination:

The shippers of my organization generally route their own shipments; I have discussed it with many of them at various times in the performance of my duties in the organization. That is one of the functions of a traffic manager. I am daily in contact with the traffic men of my organization; in fact, on every Wednesday we have a noon luncheon, at which different traffic problems, minor ones, such as routing their freight and things of that kind, are discussed. They all knew, before discussing it with me that they had the right to route their own shipments and the advisability of routing their own shipments. As to whether it has ever been exercised in Portland by the routing of any shipments, to speak of, off of the Southern Pacific (2189) rails to the Columbia River route, I don't know that any of our members have had a great many shipments coming off of the Southern Pacific going east. I have not discussed any such shipments with them, however.

The members of my organization are largely Portland jobbers and manufacturers. I have never discussed any routing from points on the Southern Pacific east of shipments that my members were making, so I am not aware of any shipments that they make from points on the Southern Pacific.

As to shipments originating on the Southern Pacific lines, like the branch lines in Yamhill County and Tillamook County and being routed Southern Pacific via Roseville to Ogden instead of routing some of them through Portland via the Columbia River route of the O.-W. R. & N. and the Union Pacific (2190), I dont know of course just what is being routed from there, but I know that this might happen: If a bill of lading were tendered to the Southern Pacific bearing the routing Southern Pacific, Union Pacific, the Southern Pacific very likely would turn it over to the Union Pacific system at Ogden. It may be some sort of laxity on the part of the traffic man, or the traffic man at Tillamook
1182 may have no particular choice in routing that particular shipment and route it in that way. I don't know, of course, what the reasons are down there for routing it over the Southern Pacific, I can't answer, and as to its holding to the Southern Pacific rails, I am not fully familiar with the way that that traffic is moving. I believe that the bulk of the traffic generally in western Oregon from points on the Southern Pacific is going south, but I don't know. I had the impression that there was a considerable tonnage moving west over the O.-W. R. & N. and south over the (2191) Southern Pacific of transcontinental tonnage, but I haven't any figures available on that and could not testify with intelligence.

As to the switching line and industrial track of the Southern Pacific, they have a yard on the east side of the river, but they also have their switching done by the terminal company on the west side, which is the same switching company that switches for the O.-W. R. & N. on the west side. The East First Street track of the S. P. is in east Portland yards. I don't know of any one on the East First Street who are members of my association, unless it is Mitchell, Lewis & Staver and Bell & Company. (2192.)

As to whether the Southern Pacific will turn traffic over to the cross-State line proposed, turn it over, now, at Crescent Lake, if it failed and refused to do so at Portland and has succeeded in holding its western Oregon traffic to its own rails, my understanding of this complaint is that the question of joint through rates and traffic arrangements is before the commission in this proceeding, as well as the building of a line across the State; and it is my understanding that those rates and joint traffic arrangements made in connection with the cross-State line are to be taken care of here. I believe that if joint traffic arrangements made in connection with the cross-State line, that the people in western Oregon now located on the
1183 Southern Pacific that are supporting this cross-State line will see to it that their traffic is routed over that line to a certain

large extent. I don't think, that the question lies entirely with the Southern Pacific.

As a practical matter and as to it being a pretty poor railroad agent serving a given territory that can't hold the bulk of his traffic to his own line, if it reaches the destination, I would say also that the solicitors serving that country or that territory would be considered by their superiors rather poor solicitors if they could not get their share (2193) of their business there also, off of a foreign line.

Q. Are you advocating here the building of another route across central Oregon in the face of an experience that has shown the inability of a competing line to get the business at Portland? Are you advocating an attempt to overcome that experience by stationing traffic solicitors all through the Southern Pacific territory in western Oregon by the Union Pacific?

A. I don't know as I quite understand your question, but if you mean are we trying to overcome the inability of the O.-W. R. & N. to get the traffic here at Portland by the building of that line, I would say that it is my opinion that with the building of that line, if it was done by the Union Pacific system, it would put the Union Pacific system in a much better light in the valley, and that they would naturally get a heavier tonnage out of that territory than they are now getting via Portland.

As to whether I think the Union Pacific should go in there and experiment with the proposition and see whether they can convert the people of western Oregon to change the practice they have been following for years, I had not suggested the Union Pacific in my testimony as the line to build the road, but whichever line it is that builds across there would naturally, in my opinion, be in a position to demand a certain amount of that traffic—not to demand it,
1184 but to control it, say through solicitation and the good graces of the people.

The Southern Pacific operates through a timber belt here in western Oregon. They serve practically all the mills in Oregon, south of Portland and in the Tillamook Country. I believe it is the practice that they place orders for timber, lumber products for their cars, for their own necessities and for their ties, they buy from mills on their own line. As to its being delivered on their own line and they or the shipper pays no freight rate, I don't believe that that is the fact in the purchase of lumber. However, I would not want to say yes or no to that (2195), Mr. Spencer. Here is the idea that is in my mind: That is, that when the Southern Pacific, or any other line buys, we will say, car material in the western territory here, that that material is all billed on commercial billing. Now I may be wrong on that. That is why I say that I can't answer yes or no to your question, because that is the idea that I have in mind, and I have nothing further than that idea to support it.

I believe that there is billing and transportation charge for lumber purchased by the Southern Pacific on its own rails. Assuming that there is not, and they take delivery at the mills that are on their

railroad, if the O.-W. R. & N. buys company material loaded on company cars at Booth-Kelly in Lane County, at Springfield, it has to pay a freight rate into Portland, so on that particular commodity, the railroad that can buy local to its own rails has the advantage (2196) and as a matter of reciprocity, the mills that make these sales to their own railroad and can't make them to a competing railroad, will give their business, to the railroad that purchases from them. They do so largely, but not entirely.

There is some milling in transit arrangement of logs. I am
1185 not as familiar with lumber and the log rate structure as I might be, as we have no lumber mills members of our organization and I have not had occasion to go into that rate structure for a long time.

Commodities that I mentioned as moving to Crane over on the line from Ontario into Burns, are those I thought would move into a territory of that kind and are those that are commonly used in any territory. In connection with that commodity, structural steel, I know (2197) there have been two contracts that our people here in Portland have lost because of this rate structure at Burns. I said at the start of my testimony that I used Crane to illustrate the rate situation in that territory, and that the rates to Burns were standard arbitraries over the Crane rates. I don't know what the two contracts referred to were for, they were separated probably by a period of a year. I don't know where the equipment for the so-called Herrick mill built at Burns was purchased.

As to whether there would be any reason for making a rate for Portland if it should happen that that rate into Burns was made for the particular purpose of enabling the movement of that tonnage into Burns, if there was not to be any other steel go in there: There seems to have been a reason for making a rate from Salt Lake. If we are going to move it in (2198), we do not necessarily have to grade the rate through. These are carried in separate tariffs, and if there was a reason for making it from Salt Lake, there is just as much reason for making it from Portland. As a matter of fact, I don't know that the only steel that has been shipped in there, and the only demand for it, was for the construction of that mill. I have never been over at Burns or Crane. There has been demand for rates on structural iron as commodity; the last demand made probably a year and a half ago. I personally requested it verbally of Mr. Edmonds, the traffic manager of the O.-W. R. & N.
1186 Company. As to why I didn't make a written request for it (2199), the contract had already been lost, and Mr. Edmonds made the remark that he didn't see any necessity for making the rate at this time, but if any other contracts come up there later, if the party that wanted to ship in there would take the matter up with him direct he would try and make a rate that would be satisfactory to them. That, of course, is always unsatisfactory, because of the fact that when bids are called on a job like that it requires rather prompt action.

The other commodities mentioned in this statement were canned goods. I took the rate from Chicago out of Union Pacific Tariff 3040–B. I have no personal knowledge of a carload of canned goods moving into Burns or Crane. (2200.) Those rates into that branch, or any other branch on the main line, would not necessarily be within the rate to the coast. The same principle is through here. If that were a fact, why should the rate from Portland into Salt Lake be carried into that branch line? It hasn't been.

Q. Well, it may have been an oversight; but you have got a transcontinental tariff here—well, has there been any request for a carload rate on canned goods into Burns or into Crane, or any movement?

A. I haven't made any, to the carriers. I would expect carloads of canned goods to go into that territory and believe that there are. In that territory I believe they could consume a car of non-intoxicating beverages. That includes quite a few of the soft drinks, and I believe that they would be brought in there in carloads and distributed among the smaller communities. Boise is the jobbing center for that territory on some commodities. I don't know just on what commodities. (2201.)

1187 Q. Well, they had a rate hearing on the rates into that territory before the Intertate Commerce Commission, didn't they, here a few years ago, and Baker had the same rate as Boise, and the Commission graded the rates so that Boise obtained the advantage, and Boise serves that territory, isn't that right?

A. I presume that Boise serves that territory on the commodities that it jobs out of Boise or are manufactured there. It would have a rate advantage. But you will notice that the comparison is made here between Portland and Salt Lake on that particular commodity, and the rate on beverages from Salt Lake for 574 miles, 89 cents, and from Portland, 558 miles, $1.18½. Those comparisons were made Mr. Spencer, not to show the reasonableness of the rate structure out of Portland, because that question isn't before the commission here, but to show just how far distant Crane is from Portland. Now, when it can be compared with Chicago on your beverages, 1,955 miles, a rate of $1.05 from Chicago, 50,000 pounds, or $1.21, 30,000 pounds, as compared with the rate from Portland, 558 miles, $1.18½, 36,000 pounds—that's the purpose of those citations. The relation this has been to the construction of a cross-State line is that it shows the remoteness of a city in the State of Oregon (2202) from the industrial centers of its own State, and shows that under your commodity rate structure as shown in these citations Crane is just as far from Portland as it is from Chicago.

Q. Well, now, you know, if these are not mere paper rates, where you point out that disparity and you need a readjustment of the rates, you have recourse before the commission to obtain it, do you not?

A. That is why I say it isn't the reasonableness of the rates that they were introduced here to show.

Exam. ROGERS. An illustration to amount to anything would
1188 have to be on the theory that the present rates were reasonable, would it not? If the present rate is unreasonable, doesn't your illustration fall? Suppose the present rate is too high?

A. Suppose the present rate is the fifth class rate to Portland.

Mr. SPENCER. You are comparing commodity rates and class rates——

A. I am comparing the rates on structural iron and steel, with the other commodities from Portland, with that rate in effect from the same commodity from other territory.

Q. But you are comparing commodity rates from the other territory and class rates from Portland.

A. That is the way rate structures go, Mr. Spencer. (2203.) That is the way the rate structure is built as I have determined it and have ascertained from inspection of the tariffs. As to there being no complaint or request for the checking in of commodity rates from Portland: I have made that request myself, on structural steel, after the contract had been let. (2204.)

J. P. NEWELL thereupon resumed the witness stand, and testified further as follows:

Direct examination—Contd.

I was asked by Examiner Rogers to make some calculations of cost, using as a basis three mills per gross ton-mile and I have; the computations I made are on three typewritten sheets.

(A statement heretofore marked for identification "Complainant's Exhibit No. 34, Witness Newell," was thereupon (2205) received in evidence.)

In explaining what results were obtained by using that formula and basis, I repeated the calculation which is made on page 111–a
of Exhibit 16, the typewritten sheet introduced there, using
1189 the suggested rate of three mills per ton-mile as the measure of the cost of the operations indicated under each subheading, and comparing them with the rates earned by each carrier. The exhibit I think speaks for itself, in the main, but it shows that under the haul by way of Alturas with the existing rates, at three mills per ton mile the Southern Pacific would make $88.44 and the Union Pacific on the haul from Ogden to Omaha would earn $17.43, this being 1.76 cents per mile.

If the haul were made by Crane, the Southern Pacific's cost would be $16.13, and adding the same net as above would show that it would require $104.57 in order to have the same net. On the balance remaining the Union Pacific, with the cost figured the same way, would make $54.22, or 3.27 cents per mile, that showing for the proposed route being somewhat more favorable than that which

I have shown where I figured the cost by the methods indicated in Exhibit 16. If that car of lumber goes beyond Omaha, so that the earning (2206) as divided between the carriers is less, I find that the Union Pacific, figuring its cost at the rate of three mills, would lose $5.32, and taking it from Crane would make $31.47.

I introduce one other calculation there which I didn't put in the Exhibit 16 on page 111–a. That is on haul from Klamath Falls, because I didn't claim that it was practicable to make that kind of a traffic arrangement for that point, permitting the Southern Pacific to make as much on that very short haul as it could on the haul through Alturas, but I put a similar calculation in here. Because it indicates on this basis of three mills the same condition of loss by one of the carriers under the existing rates.

Exam. ROGERS. Did you find any basis for the three mills, Mr. Newell, or did you look for it? (2207.)

A. I didn't look for it. I didn't think that any flat rate could be applicable, at least in this western country with the moun-
1190 tains intervening in so many places affecting the cost. If you will note here, if you compare my figures in this exhibit with those on page 111–a of Exhibit 16, it shows that the figure of 3 mills is too low for the Southern Pacific and too high for the Union Pacific.

Exam. ROGERS. Well, that may be, but I think in a case I had in mind where the carriers used the figure—I think the exact figure was 3.026, as I recall, and some of the carriers, the Southern Pacific and the other lines, said that was applicable on a whole from California to Chicago. I am not certain about that.

A. Well, it might be on that long haul, with the level grades and the fact that you would have the down grades as well as the up grades introduced in it. In this case, you see, the haul on the Southern Pacific was from low ground to the top of the mountain, or at least somewhere near, to a high elevation, where the Union Pacific takes it and hauls it to a low elevation, so the grade is against the Southern and in favor of the Union. (2208.)

Q. Had you finished what you wanted to say in explanation of sections three and four of this exhibit? I think you had just started and wanted to finish.

A. I think I had finished that. I put in some calculations from Klamath Falls on pine lumber; they show on this same three-mills rate that there would be a loss to one carrier, the Union Pacific. By taking the traffic, figured on this same basis of cost, via Crane, as far as the loss is concerned, it would be converted into a net earning. The results this method of computing these costs as shown on Exhibit 34 produced, so far as it may have tended to confirm or otherwise the results reached in using my own basis of ascertaining costs; it confirmed the same general relations between the costs and the earnings by the two proposed routes. (2209.)

I made a similar approximate check by the use of operating ratios for the purpose of testing the results obtained by my own
1191 basis from the standpoint of operating ratios, and with the addition of constructive mileage I found the same confirmation of the general relation between the rates and the cost.

Comr. McMANAMY. Exhibit introduced by Mr. Newell was 34, and this will be No. 35.

(Said statement was thereupon received in evidence, marked "Complainant's Exhibit No. 35, Witness Newell."

In explaining briefly what I did here and what results I ascertained, I took the operating ratios of the carriers as shown by annual reports, I allowed constructive mileage to the Southern for origination, and to the Union for delivery and to the Southern for its heavy grades on the Cascades and on the Sierra Nevada Mountains. The figures are all set out here. The calculation is of the same nature, except that I (2210) used the haul via Roseville and the operating ratio in order to obtain for the Southern Pacific a cost per mile, per car-mile, that is to be applied to the haul by way of Alturas.

With that explanation, I think the whole thing can be understood without any further comparisons. The net result is to show approximately the same condition, that is, that the Union Pacific under this method of figuring cost could have better earnings per mile on on the haul from Crane without reducing the Southern net earnings in total amount. This last computation I spoke of consisted of two pages.

Exam. R[illegible]s. Mr. Newell, as to Exhibit 34, you said you didn't believe the three mills was a proper figure. Would you mean that some other figure might be applied, or did you mean that it just couldn't be done by that method?

A. I don't think it can be done by that method. I think the cost is too variable to permit of one figure being taken as applicable to all the hauls.

1192 I, likewise computed, the cost, the direct cost, of moving a car of fir lumber from Eugene to Omaha via the Portland gateway. (2211.) That computation is contained on one sheet.

Q. That is the third sheet of the bunch I just handed around. It is entitled "Car Fir Lumber, Eugene to Omaha via Portland, 56 Tons"; I would like to have that received as Exhibit 36, please.

(Said statement was thereupon received in evidence, marked "Complainant's Exhibit No. 36, Witness Newell.")

The only thing that I need to call attention to on this sheet is how the cost via Portland compares with the cost between the same points via the two other gateways shown. Those two comparisons are shown at the bottom of the sheet, showing that that via Portland is slightly less than it would be via Alturas, but considerably more than it would be via Crane.

Q. Then that would indicate that for the movement of lumber from Eugene to Omaha or points east of Omaha, there would be

no saving by shipping via the Alturas route when it is completed in comparison with the existing route via Portland?

A. The cost to the carriers wouldn't be less.

The summary on the bottom (2212) of 36 is supposed to represent cost to the carriers, the direct cost. I have indicated in my Exhibit 16 the economies in the handling of the existing traffic between Ogden and western Oregon by the use of the proposed cross-State line in shortening distance and in consequently reducing expense. In citing, in this connection an instance of a very considerable investment authorized by this commission for the purpose of reducing expenses, I have at hand a quotation from the United States Daily, quoting the Interstate Commerce Commission as granting authority to change the route of the Great Northern in Washington, near Leavenworth—where they built 15 miles to reduce the maximum grade from 2.2 to 1.5 per cent, eliminating 1,285 degrees
1193 of curvature, shortening the line one mile, at a cost of $3,631,000.00, estimated saving of $200,000.00 a year in their operating expenses—pardon me, that is not a correct statement—an increase of $200,000.00 per year in their net operating income. I take it that the saving is partly in other things than the direct operating expenses in some manner.

Exam. ROGERS. I want to ask a question or two about Exhibit 16, Mr. Newell. As I understand it, part of the material or basis for your Exhibit 16 was also used in the grain case.

A. Yes; my study of the costs on the Oregon-Washington Railroad & Navigation Company.

Exam. ROGERS. What I was wondering about was to what extent in so far as your Exhibit 16 is concerned, are we basing on the correctness of the same matter in this proceeding that the commission will pass upon in the grain case?

A. Only in so far as figures on direct cost are concerned, the derivation of unit costs. In that case the same unit costs were applied to different hauls of another commodity, and there was introduced calculations of indirect cost and return on investment to make up the total cost to be compared to the charges made for the haul. In this case, I have made no corresponding calculations of indirect cost and return whatever. (2214.)

PORTLAND, OREGON, *August 15, 1928.*

J. P. NEWELL thereupon resumed the witness stand, and testified further as follows:

Cross-examination:

In opening my presentation by Exhibit No. 16, on page 3,
1194 in referring to the proposed extension of Union Pacific Railroad from Crane to Crescent Lake, I meant the extension of the Union Pacific system. That line there, I believe, is owned by the Oregon-Washington Railroad & Navigation Company, but operated by the Oregon (2216) Short Line, both of which are parts of the Union Pacific system. I was thinking of it as system rather

than Oregon-Washington Railroad & Navigation Company. I had in mind the railroad of the Oregon-Washington Railroad & Navigation Company extending from Ontario Junction to Burns. In my synopsis on page 7, speaking of the distance from Eugene, a central point for western Oregon, my study is made upon the premise of Eugene as the railroad center and commercial center in western Oregon.

Comr. McMANAMY. Mr. Newell, before we get too far away from that other question, where is the eastern terminus of the Oregon-Washington Railroad & Navigation Company?

A. As an operating unit it is at Huntington. Now, I don't know just what the ownership arrangement is whereby they——

Comr. McMANAMY. Ontario is east of Huntington, is it not?

A. Thirty miles east—forty miles east of Huntington.

Comr. McMANAMY. Is Ontario located on the line of the Oregon-Washington Railroad & Navigation Company?

A. It is not. It is on the line of the Oregon Short Line.

Comr. McMANAMY. And is the extension from Ontario to (2217) Burns and Crane an extension of the Oregon-Washington Railroad & Navigation Company lines?

A. Not by any physical connection. I am not sure as to the arrangements of ownership. I understand that the Oregon-Washington Railroad & Navigation Company does own that line. I don't know how it is when it isn't connected.

Comr. McMANAMY. I didn't understand it in that way.

I worked for the Oregon Railroad & Navigation Company
1195 as an engineer for a number of years. The eastern terminus of the main east and west line of the O. R. & N. Company, the Oregon Railroad & Navigation Company it was then, was and is at Huntington. (2218.) The Oregon-Washington Railroad & Navigation Company is a successor to the Oregon Railroad & Navigation Company. As to whether it acquired the properties of that company and of other companies, my knowledge of that is confined to newspaper reports, and so forth; that is my understanding that they did. I have seen the maps of the lines of the Oregon-Washington Railroad & Navigation Company repeatedly and would recognize one if it were presented to me. I have been over the line repeatedly, both through my relations with it as an official and as a citizen and as a rate expert. I have had access as an engineer for the public service commission to its books and accounts on several different occasions during recent years. I recognize those lines of railroad as the lines of the Oregon-Washington Railroad & Navigation Company's system in the States of Oregon, Washington, and Idaho on the map you hand me, bearing the legend, "Union Pacific system (2219) lines of the Oregon-Washington Railroad & Navigation Company"; with the exception that I am not familiar with the showing of the line from Malheur Junction to Burns as being a part of the Oregon-Washington Railroad & Navigation Company. It is a matter in which I hadn't interested myself at all. It wasn't a part of it when I worked

for the company, and, while I have understood that it was owned by that company, I didn't consider it of any importance here, so I have just been thinking of it simply as a part of the Union Pacific system. It is my understanding it was under lease to the Oregon Short Line and operated by it. I didn't take any pains to verify it; I didn't think it of any importance.

(Said map was thereupon received in evidence, marked "Defendants' Exhibit No. 37, Witness Newell".)

1196 As given on page 7 of my exhibit, the distance from Eugene to Union (2220) Pacific points east of Granger would be 429 miles less than by the present route through Roseville and Ogden. By the present route through Roseville and Ogden I mean the route of the Southern Pacific Company from Eugene via those gateways.

I happened to take Granger because that is the point of junction with the Short Line and the Union Pacific, and all comparative distances to points beyond that would be the same difference. In other words, the Southern Pacific interchanges with the Union Pacific Railroad Company at Ogden.

I supposed the western terminus of the Union Pacific Railroad Company was Ogden itself. I don't know the exact technical point. The Oregon Short Line Railroad Company connects with the Union Pacific Railroad Company at Granger, Wyoming. I do not know of any terminus of the Union Pacific Railroad Company west of Ogden. I have said Burns will be brought 160 miles nearer to (2221) Portland by this proposed cross-State line. This mileage is computed on the assumption that an operation by the railroad now terminating at Burns across this proposed cross-State line to Portland would proceed through Crescent Lake and thence via the Southern Pacific to Portland.

I didn't take into consideration an operation via the cross-State line from Burns or Crane and thence via the Great Northern to Bend and thence by the O.-W. R. & N. to Portland. That would be slightly longer than by way of Eugene. I said Boise, Idaho, will have the distance to San Francisco made less than the present route through Ogden by 273 miles. That reference was made in the consideration of southwestern Idaho territory and its business relation to San Francisco or San Francisco Bay points.

1197 I did not make reference to the Rogerson-Wells line because it is my understanding that it is so little used as not (2222) to be a factor in the case. I obtained that understanding from common talk with Idaho people, showing as regards the traffic that moves over the Rogerson-Wells line. A computation to determine how much further it is by the Rogerson-Wells line from Boise to San Francisco Bay points than it may be or will be if the cross-State is projected from Crane to Crescent Lake and thence you make a connection with the Southern Pacific, shows from Boise it will be 90 miles further by Wells than by the use of the cross-State line, on a haul of some 850 or 900 miles. I have the mileage figures from Ontario before me, not from Boise.

Q. You say that the crucial point in this case is the possibility of justly requiring the Southern Pacific to interchange traffic originated by it in western Oregon with the Union Pacific at the proposed junction. You would not assume that the cross-State line would be justified, or should be required, if the western Oregon traffic is not to be routed over that line—by western Oregon traffic that I mean, of course, traffic east and west to western Oregon? (2223.)

A. I think that is true.

My study proceeds upon that assumption, to analyze and take transportation costs as you estimate and determine them that would attend the transportation respectively via the cross-State line, via Roseville-Ogden line, and via the Klamath Falls-Alturas line.

I did not take into consideration in this study, Exhibit 16, the Columbia River route of the Oregon-Washington Railroad & Navigation Company as another route for western Oregon from Eugene. It has been supplemented by the exhibit which has been introduced yesterday. In the analysis brought in yesterday, that also proceeds from Eugene.

There is a greater volume of tonnage, as I recall the figures of traffic of western Oregon, or originating in western Oregon, in the counties north of Eugene than in the counties south of Eugene;
1198 out of Lane County through Ogden than out of any (2224) other county. Next to that, I think, is Linn. I would answer your question this way, that the greatest density is in Lane and the counties immediately adjacent to it. There is considerable, both north and south, but mostly north. (2225.)

As to observing the traffic density and development reflected by the exhibit of Mr. Wiggins: I don't know the number, but Mr. Wiggins collected that information and, after consulting with me, arranged it in the form in which it was presented and which I have used.

As to whether the cross-State line could not be sustained or justified unless it was supported by this western Oregon traffic, particularly since Klamath Falls and Bend are practically eliminated from this operation; I would not consider Bend eliminated. I have admitted that Klamath Falls would be practically eliminated with the construction of the Modoc Northern, but certainly not Bend.

As regards a compulsory connection at Crescent Lake, I would say yes to your question; not as regards possibly an extension, a line direct to Bend itself. I have not studied it in order to answer that question, but my presentation is all based on the assumption that there will be such a division of traffic.

On page 9 in this manuscript, the traffic is divided into direct and indirect costs and I explained these two different characters of cost in the exhibit. (2226.)

Q. But you say in that connection, "Indirect transportation expenses, therefore, would ultimately disappear." I am reading from page 10, "if it were not for the fact that, with a growing system, the process is repeated with each addition to the mileage so that

although these expenses are entirely direct on one part of the system, they may be largely indirect on other parts." Now, I am wondering how indirect cost of transportation could possibly disappear. I understand indirect costs are costs, speaking generally, that do
1199 not result from direct physical operation of the property?

A. Correct.

Q. Now ties, the trestles——

A. Will you pardon me for interrupting you. I see that you have overlooked the meaning of transportation expenses. I am referring to that class of expenses in the accounting system which is called transportation, and has nothing to do except with train operation and stations, and so forth. It does not include maintenance of way——

Exam. ROGERS. That is just the transportation block of accounts?

A. Yes; that is just the transportation block of expenses. (2227.) That is, those accounts are promulgated by the accounting rules and requirements of the Interstate Commerce Commission and they come under the head of transportation expenses.

As to my analysis of these different costs and to what data and reference the information was ascertained: The use of the unit costs is explained here, the reason for certain modifications of them and the adoption of certain ones. I have used only the operating accounts of the Southern Pacific Company as found in their annual report. I did not go into that any further than that. Those are explained on page 61. This study starts with an analysis of the operating expenses of the Oregon-Washington Railroad & Navigation Company (2228) in 1925.

Q. But the Oregon-Washington Railroad & Navigation Company is eliminated from the operations that you have in mind, and subsequently present with the resulting costs or direct costs on the through routes that you discuss, namely, the cross-State line, the Klamath Falls-Alturas line, and the present Roseville-Ogden line. Now wherein will the O.-W. R. & N. study and analysis assist you, or wherein is its use justified as a basis for these other calculations?

A. It enters directly in the calculations which I present from Bend, which are rather an important factor in the whole situation. It gives me a study of costs in Oregon, and the Southern Pacific line is, in Oregon, subject, in many respects, to similar condi-
1200 tions. It gives me a basis for comparison with the Short Line. I make a similar study of the Short Line and comparison of all the figures found in their operations enables me to arrive at more satisfactory conclusions as to unit costs on both lines, and, therefore, I consider it of use in determining the unit cost to be used in this entire question.

I didn't make a study for the Public Service Commission of Oregon in 1925 of the Oregon-Washington Railroad & Navigation Company's operations, I used 1925 figures for this study. (2229.) I filed an exhibit or a report with the Public Service Commission of Oregon, entitled "Report on Railroad Extensions to Serve Short Line

and Central Oregon," and dated 1925. That did not involve any complete study of the O.-W.; only some revisions and extensions of my own former study. In connection with that report, the cost was determined, per car-mile for the respective divisions of the O.-W. R. & N., particularly the first division on the Columbia River from Portland to Umatilla, and some such comparison was made as to the direct cost per car-mile for moving the business over the second division through Umatilla and Messner to Huntington. (2230.) The figures on page 35 from main line alone the cost on the first division would be 9.78 cents per car-mile, and on the second division 12.79 cents.

I did not make any comparison of that kind for any part of the Southern Pacific operations in western Oregon, or undertake to determine what they might be on the cross-State line on the same basis. The figures which I give would enable one to take that, and by a very brief calculation, to obtain the same corresponding figures. In other words, if we take the exhibit I introduced yesterday, the O.-W. R. & N. Exhibit No. 36, you would be able to make a comparison via the entire Union Pacific route from Portland to Omaha, and of the cross-State route from Eugene to Omaha, and of the Southern Pacific route to Omaha, but you would not be able to
1201 make any comparison as between Portland and Ontario, on the one hand, and Eugene and Ontario on the other, via the cross-State line.

Exam. ROGERS. Mr. Newell, what was the purpose of this 1925 study to which Mr. Spencer refers?

A. That had to do with the application of the Northern lines for permission to extend their lines to Klamath Falls, and, in that connection, the Public Service Commission presented some figures showing approximately these relations of cost of transportation by way of the cross-State line.

Mr. SPENCER. No; this 1925 study was on a petition for rehearing before the Interstate Commerce Commission, wasn't it?

The WITNESS. You will have to ask——

Mr. DEY. That 1925 study, Mr. Newell, was introduced as Exhibit No. 56 in the record of the Klamath Basin Cases, Finance Docket 5111 and four or five other dockets, heard at the same time before Director Mahaffie, in October, 1925. I think you introduced that as an exhibit, did you not?

A. I did; yes. I appeared there as a witness for the Public Service Commission, the Public Service Commission of Oregon, having intervened in those cases. (2232.) The Public Service Commission wished to have the cross-State line kept in view as a part of the necessary solution in that case, and in order to make such figures as I could, in the time that I had to present that, I took my former study made in the Columbia Basin Rate Case, in 1919, and, by certain modifications, applied some of those figures to cost across the State. I do not consider that at all as reliable as the figures which

are now presented, and in making the analysis which I now have I did not use this at all, and therefore I am not up on the exact figures that are in that; I don't recall them in all cases.

Q. Now your operating expense on the cross-State line is arrived at by assuming that there will be a 56-car train loaded, and that the operations will be comparable to the operations of the Oregon Short Line Railroad Company main line; is that right?

1202 A. Most of the unit costs used for the cross-State line are the same as for the O.-W. I used train mile and car mile cost as exactly the same. For the gross ton mile, which is practically a maintenance-of-way figure and covers most of the maintenance (2233) of way. I took the Short Line, and for resistance cost I took an intermediate between the O.-W. R. & N. and the O. S. L. That is explained on page 62. On page 64 I state, "The average number of cars per train on the O. S. L. main line was 46.3, but if I assume that one-third of the main line train-miles were way freights and that they averaged one-half as many cars as the through freights, then the latter must have had 56 cars each, which I take as the average through train for these calculations." I wanted to use 56 if it was justifiable, because I had used that previously on the O.-W. I would not figure on much way-freight service on this cross-State line to begin with at least.

These calculations of direct cost gives the total cost Eugene to Ogden $220.90 and Ogden to Omaha $149.50, which gives a total of $372.40; and from Eugene via Alturas (2234), that cost on the unit from Eugene to Ogden would be reduced to $174.40.

My figures show that it is more expensive to operate out here on the west end than it is on the east end, and when figuring the cost from Eugene to Omaha via the Crane line I do not use the same factors all the way through; I use the same figures for the Union Pacific that I have for the O. S. L. both ways. Practically all these calculations are based on lumber tonnage; all that you have so far considered. There are some on other commodities. In the main it is lumber which constitutes something like 82 per cent.

I have shown at certain points here where the operation is conducted at a loss. (2235.) Even on the Union Pacific; and in the same connection that it was conducted at a profit on the Southern Pacific. I don't know why it is, but I think it quite evidently is.

1203 I obtained from Mr. Wiggins and Mr. Curtin the rates applied to "Car pine lumber destined beyond Omaha"; as found on page 115.

Q. Yes. Now you have a net loss on the Southern Pacific from Klamath Falls to Omaha via Roseville of $7.41 and of $27.21 via the Union Pacific; and yet, as I understood you yesterday, in response to a question from the examiner as to the use of the three mills to cover direct transportation, you stated that it would be too high for the Union Pacific and too low for the Southern Pacific. Now if the divisions are as applied on this under existing conditions

as illustrated by this item, I (2236) have called to your attention, would you regard the application of the three mills too high for the Union Pacific and too low for the Southern Pacific?

A. Well, my figures of cost show for the Union Pacific less than three mills per gross ton mile on a car of fir lumber. Now I didn't check it out on the pine lumber. And my question perhaps yesterday, or my answer, ought to have been limited to fir lumber, which is what was under consideration at that moment. It would not apply necessarily to pine lumber, a lighter load. (2237.) But the divisions are such that the originating line, the Southern Pacific, obtains a larger percentage than the Union Pacific, and with that arrangement the transportation haul is more profitable to the Southern Pacific than it is to the Union Pacific, particularly from Klamath Falls.

As compared to figures which I found, my own figures of cost in Exhibits 34, 35, and 36, show the Southern Pacific haul from Eugene to Ogden cost them more than three mills per gross ton mile to Ogden, and those for the Union Pacific from Ogden to Omaha as costing a little less. In all cases that is direct cost. I am not talking of anything else here. I have that right before me, the cost on fir
1204 lumber (2238) from Eugene to Ogden was 3.17 mills. That is a note which I myself have made, you will find it on page 111-A, the totals. I merely introduced the calculation. For the Union Pacific from Ogden to Omaha, 2.7 mills per gross ton mile on fir lumber. Both costs would be higher on pine lumber, with that pine loading. Pine lumber loads much lighter than fir. I have taken the records of loadings out of the county as furnished me by the Southern Pacific. As to loadings on pine averaging about as heavy as they do on fir; my understanding is, about the same number of feet, and it being a lighter weight lumber the carloads are much lighter.

Q. Yes. Now, you have referred to page 111-A of your Exhibit 16, and you have a net cost per mile—no, this is the earning per mile here, isn't it, this fraction——

A. Yes; I have the costs per mile noted in my own copies.

Q. I see. Now, referring here to Exhibit 34, via Alturas again, that originates—the first item there on the first page of Exhibit 34—you are starting, now, from Eugene, a (2239) carload of lumber, as I understand it, fir lumber. Your earnings for the Southern Pacific to Ogden were $235.75.

A. Pardon me, that is a typographical error. That should be $253.75. You will notice the net earnings indicate that "235" isn't right. The figures are transposed.

In determining the earnings of $253.75, I have stated in my study here that I assume that the divisions between the Southern Pacific and Union Pacific would be made on the routing through Alturas and this would be the same as on the routing through Roseville. At $253.75 I deducted the cost in this case (2240) on the three mills basis and have a net earning of $88.44. The haul to Omaha is

$183.75. The cost is more than the cost of the haul from Eugene to Ogden, naturally; it is six miles farther. As to whether the distance of six miles shouldn't make much difference if it is
1205 very much more favorable for operation: Well, this takes no account on the three mills per gross ton mile. My own figures take account of that difference. There is a difference there of $17.43, the net earnings on the Union Pacific. In saying that the three mills is too low for the Southern Pacific and too high for the Union Pacific, I say that as shown by my own calculations of cost it doesn't cost the Union Pacific quite three mills for that (2241) haul, and it does cost the Southern a little more than three mills for its part of it.

Exam. ROGERS. Is that because of operating conditions occur[r]ing on one compared with the operating conditions occur[r]ing on the other?

A. It is taking in all conditions. For instance, in this State there is a train operation law that requires a bigger crew in this State than in other States, and there is lower cost of fuel on one than on the other, and the Southern has heavier grades than the Union Pacific. The additional mileage you go through Roseville would be a factor in that too.

On page 123 of my exhibit, the estimated net earnings that would accrue to the proposed route are discussed later as regards the cross-State line only. I assumed the cross-State line would cost (2242) nine million dollars and then I added a part for a share in the Oregon Trunk line, over which operations would have to be. By Oregon Trunk line, I mean the Great Northern.

Q. The Great Northern extended south of Bend. The Oregon Trunk didn't extend, did it?

A. I supposed it was still called Oregon Trunk, commonly spoken of as such.

Q. Well, the Oregon Trunk—I think the records show the Oregon Trunk filed the application, then withdrew it, for the extension from Bend to Klamath Falls, then the Great Northern entered into a contract for the use of the Oregon Trunk line and built the line from Bend to Chemult, and operates from Bend to Klamath Falls by itself.

1206 A. Well, then I should have said "Great Northern" when I have said "Oregon Trunk" in the description.

Exam. ROGERS. Well, on that point, Mr. Newell, did you assume that the line, if constructed, the cross-State line, would have no trouble in entering into an arrangement for the use of this line from Bend down to the junction?

A. I did.

Exam. ROGERS. Well, what difference would it make if they (2243) did—in your computation and concluding—if they did have trouble and couldn't enter into that arrangement?

A. Well, then we would have to introduce the cost of interchange at both of those junctions—the interpolation of another carrier, mak-

ing a three-line haul instead of a two-line haul. The junction point, or the crossing of the cross-State line with the line of the Great Northern Railroad south from Bend is approximately 53 miles and 18 miles north of Chemult.

Exam. ROGERS. I was just wondering how, in arriving at a conclusion in this case, we could proceed on that assumption.

A. The Great Northern took the position throughout the discussions in the other case that it was ready to grant such use of its lines on proper terms to any other carrier who might have occasion to use it, and such a stand was announced repeatedly, and I have no doubt is in the record, though I myself can't confirm it as being in the record, but I assume the attorneys can.

The line has been built now, and no common user condition has been imposed. I presume it would be a matter of negotiation between the railroads, the Oregon-Washington Railroad & Navigation Company on the one hand, and the Great Northern on the other, as to whether the Oregon-Washington (2244) Railroad & Navigation Company would be privileged to operate from Bend down to a connection with the Great Northern. I should have to leave that
1207 to the attorneys to argue. I don't know what the actual facts and procedure would be. I have assumed that the Great Northern would admit the Oregon-Washington Railroad & Navigation Company over that operation; over these rails, on the basis of assuming half the cost of the line involved. I didn't put it on a rental basis, I contemplated the sale of an undivided half interest in the line and equal joint possession and use of it by the Oregon-Washington Railroad & Navigation Company from Bend to the junction or their rental based on interest on such a cost. As to the interest I figured on: I said what I did was on the basis of actual ownership of one-half of it, and have calculated return upon that additional investment in addition to the cross-State line proper. (2245.)

I didn't find any record of the present investment to date by the Great Northern and its construction to base the cost on. I took certain estimates which they had presented beforehand as to what they had expected that it would cost. Those I obtained from the Public Service Commission. That estimate contemplated the use of that logging railroad of Shevlin-Hixon, for the first twenty-six or twenty-seven miles. I don't know whether they are rebuilding that now or not. I saw something about it in the newspapers. On page 139, I have the investment per mile from Bend for that 53 miles running down to connection with the Great Northern, including the purchase of the Shevlin-Hixon line at $1,816,000.00. That is for the 71 miles estimate. I don't know what the figures of actual cost of construction (2246) were, but that was taken from a copy of an exhibit sent me from the Public Service Commission, and was then marked "Exhibit E," and was presented by the Great Northern in return to a questionnaire. They stated that a three-quarters interest

in the Shevlin-Hixon line would cost them $375,000.00. I used the entire cost of $500,000.00 on the same basis, if this was three-quarters of it, and added that to the $1,316,000.00 which they estimated
1208 as the cost of the 47 miles from the end of the Shevlin-Hixon line to a point near Pauncona. I suppose the Shevlin-Hixon people would have to be reckoned with if they have an undivided fourth interest in 26 or 27 miles of that railroad.

Exam. ROGERS. I would like to ask another question, before we get so far from it in the record, and that is as to what traffic you had in mind when you told Mr. Spencer this morning that the cross-State line could not be justified without the western Oregon traffic, as I understand it, eastbound western Oregon traffic? (2247.) Now what traffic did you have in mind in making that statement?

A. That traffic which has heretofore been and is to-day moving by the Southern Pacific through Roseville and through Ogden and delivered to the Union Pacific at Ogden.

Exam. ROGERS. What I had in mind, did you have in mind that in addition to that western Oregon traffic that would, according to your assumption, move across the proposed line, the showing that has been made as to Idaho traffic westbound and the traffic that would originate on the line?

A. His question referred to the western Oregon traffic only, both in and out, and my answer referred to that, which—it is mostly lumber traffic, and the calculations of such traffic here presented are based first on the inclusion of the amount of traffic now moving, that is, as measured by the 1926 records, as moving to and from western Oregon through Ogden, therefore, traffic which passes over the Union Pacific at present and its natural growth as estimated and presented here plus those figures of natural growth which Mr. Teutsch presented as agricultural and animal product traffic.

Exam. ROGERS. Well, the question I had in my mind was whether your answer contemplated this situation, that the Idaho (2248) traffic and the traffic originated on the cross-State line might move over the cross-State line, but unless it got this western
1209 Oregon traffic the line could not be justified?

A. That was the intent of my answer, yes; I would doubt the justice of a compulsory building. In my computation here of net earnings for the proposed cross-State line I do include the lumber traffic now moved by the Oregon-Washington Railroad & Navigation Company out of Bend. I intended to confine my calculation to the fact that that pine lumber traffic now goes east, and always will go east, and it is that which did go east in 1926. My study disclosed that practically all of it went east. If it is routed east another competing road would share in the haul with the Great Northern, and unless we get a common user of the Great Northern's line, the Great Northern would haul it down to the junction. Then the Union Pacific would receive it on east from the Short Line, after it traversed the cross-State line (2249) and the Oregon Short Line.

I think the Oregon-Washington Railroad & Navigation Company would enter into a long term, burdensome obligation with the Great Northern for the use of the railroad from Bend down to its line, 53 miles, to junction with the proposed cross-State line, paying the fixed charges attending such an obligation, take on that additional maintenance and operating expense that is common to both carriers using the road, and then haul it by that route east, when it has its own line in there now and that is practically the only use that it has for its present line into Bend, if it took into account the relative costs of the operations.

It would hardly involve a scrapping of the line operated by the Oregon-Washington Railroad & Navigation Company in the Des Chutes Canyon. There would be other business, of course, to be considered. There would be distributing business from Portland going into that territory. The lumber isn't the only traffic. Of course, it is the preponderating traffic from Bend. It is practically the substantial traffic (2250) of that branch. I don't know
1210 what proportion it makes, but, as I recall it, it is at least 80 per cent.

In the expense for operation on the Bend traffic, I didn't take into account the investment in the Des Chutes branch. It would have no part of it. It is there to be borne whether it hauls any traffic or a great deal of traffic. I didn't know there is a joint operation there between the Oregon-Washington Railroad & Navigation Company and the Oregon Trunk Railroad, wherein to the owner of the line the Union Pacific's subsidiary, the Des Chutes Railroad Company, is obligated to pay heavy rentals for some nine hundred odd years. I haven't seen it. I know it is a joint operation for a very considerable distance in the canyon, and that the railroad pays a rental there of course. That is not taken into account. It is an expense that has to be borne regardless of (2251) this traffic. If this traffic can be handled by another route, at a reduced direct cost, there is more of an earning with which to pay all the expenses, whatever they may be.

Q. Now, I wonder whether you have figured that; if you don't know what that contract is and what the obligation of the Des Chutes branch is, how can you say that it is more economical to route it over the Great Northern and then return it to the Oregon-Washington Railroad & Navigation Company?

A. Simply because of the showing of the actual cost of operations over the two lines. I only show the direct cost; the other accounts aren't affected at all by the volume of traffic.

Q. Well, now, let's see. The cost of handling traffic is affected by the investment in the property, isn't it?

A. The cost—what you are entitled to recover in rates, of course, is affected by that, but the direct cost of handling the operations themselves don't include the investment, or the return on it, be-

cause those are independent of the traffic, you have to pay them anyway.

1210½ Q. I know, but irrespective of the tag that we may put on the burden encountered in moving the traffic, it is all there, isn't it? The taxes are there?

A. Certainly.

Q. The maintenance is there?

A. Yes.

Q. The increased train mileage is there?

A. Well, that is a part of your direct cost.

1211 Q. That is a part of your direct cost—but they are all in there. Now, you are going to handle this traffic that is now handled on the Des Chutes branch of the Oregon-Washington Railroad & Navigation Company, you propose the acquisition by the Oregon-Washington Railroad & Navigation Company from the Shevlin-Hixon Company and from the Great Northern Railroad Company of a property interest in 53 additional miles of railroad for the Des Chutes traffic.

A. Yes. There will be no other traffic of substantial volume over that 53 miles for the cross-State line except the traffic that the Union Pacific now enjoys, together with its natural growth, of course. In determining whether that would be profitable for the railroad to route it down the cross-State line, those elements should be considered. As to the fact that the investment is going, to all intents and purposes, be lost in the Des Chutes line and that there (2253) will be no further use for it: You couldn't say that. There certainly will be use for it. It will take away part of the traffic from it, of course. The Des Chutes traffic of both the railroads, to a large percentage is lumber; probably 90 per cent.

Exam. ROGERS. Mr. Newell, one more question about this western Oregon traffic. What is your judgment, in the event that a compulsory or voluntary traffic arrangement is not entered into between the Southern Pacific and the Union Pacific for interchange at Crescent, but assuming that the line is built and through rates established, do you think that the shippers can be depended upon to route their traffic over the cross-State line, notwithstanding that there is no traffic agreement between the carriers?

A. I think that the shippers would be entirely indifferent to it, except as it might be a matter of speed on shipments where time was an element to the shipper, and I presume there would be a good many cases where that might enter in.

1212 Exam. ROGERS. Well, do you think that that would be true on lumber?

A. I doubt if it would be important on lumber. It might be in some cases. (2254.)

Exam. ROGERS. Well, what would be the net result if there was no traffic agreement between the carriers, and the shippers shouldn't exercise their right to route their freight?

A. That would depend upon the interest the carriers thought they had in the matter. I have shown it is practicable to make joint arrangements profitable to both carriers.

Exam. ROGERS. Well, assume that the Southern Pacific routes over their line via Alturas or via Roseville all the traffic that they get, as they do now, what would be the result if the shippers don't exercise their privilege of routing their freight?

A. Well, the Union wouldn't get any. The cross-State line would be left without it. My understanding of the case is, though, that the petition is to the commission to establish such joint rates if they are not made voluntarily for such interchange.

Exam. ROGERS. Yes, but, of course, my question assumed that there was no voluntary or compulsory interchange at Crescent Lake. (2255.)

A. Well, then it would be altogether a question of the interest of the carriers that would govern their action, but it seems to me that the most profitable arrangement to both carriers would obviously be that interchange. It is quite conceivable, however, that one might insist on taking all the profit and prevent an agreement.

Exam. ROGERS. Well, my main inquiry was whether in the absence of an agreement by the carriers, whether they look at it in the same light that you do or not, the shippers would be depended on to route their traffic that way?

A. Well, I am not versed in that, but I would expect not.
1213 I don't think they would expect to take enough interest in the matter to insist upon routing via the cross-State line. I am referring there particularly to lumber. I think on some of the perishable products they probably would insist.

Exam. ROGERS. Well, to follow that one step further, suppose they did exercise the routing on perishables, but didn't on lumber, what would your net judgment be as to the justification for the line?

A. Well, I am doubtful. I wouldn't want to say that it wouldn't be justified. I haven't attempted to apply such a (2256) calculation, but my first thought is that it wouldn't be. Now, I might hunt that up from my records here and see what it would come to, but I don't think that it would be justified, if you were to eliminate the lumber traffic in western Oregon from the calculations. The perishables is something that I think would grow to a large extent, but it wouldn't be a very large factor, I believe, in the beginning.

Comr. MCMANAMY. What traffic are you taking into consideration in your answer? Traffic which was shown to be tributary to the line by Teutsch's exhibit?

A. Yes. All my information on the basis of perishable stuff is taken from Teutsch's exhibit.

Comr. MCMANAMY. You are not taking into consideration the possibility of through traffic to and from California points? In other words——

A. From Idaho, did you mean?

Comr. McMANAMY. Well, from Idaho southwest, and from San Francisco and other California points northeast, which has been developed in this record. Are you familiar with that?

A. Well, as far as the Idaho traffic is concerned, it is that which we have asked permission to put in later. I haven't given
1214 that consideration, because the figures didn't reach me in time to calculate the costs of movement. (2257.)

Comr. McMANAMY. You have not taken into consideration the possible traffic or the potential traffic which has been shown by the different witnesses that have appeared here?

A. I have as far as Oregon traffic only is concerned.

Exam. ROGERS. Well, I understood you, a little while ago, to say that you had taken into consideration the Idaho traffic, in one of my questions.

A. Well, I must have misunderstood you, because I haven't yet figured the Idaho traffic itself, in or out. The Idaho traffic is all tributary to the Oregon Short Line Railroad now.

Q. And if it moved over the cross-State line it would be traffic lost by the Oregon Short Line Railroad Company?

A. Well, if the Oregon Short Line were considered as owning the cross-State line, it, of course, would be only a diversion in another direction over its own lines. It is spreading out the operation over additional mileage.

Now, on page 128 I refer to some lumber shipments, and to the increase that I contemplate in the movement of lumber. I have made forecasts on the increase in this (2258) lumber production before, and numerous men, some of the most experienced and seemingly best informed and qualified manufacturers of lumber and experts in the lumber trade, have made prophecies and estimates on this lumber that was going to be manufactured, taken from this northwestern country and the increase that would result from the passing out of the lumber production by the southern pine mills. As to the estimates in that regard having fallen dismally short of the result that really obtains; I doubt whether that is strictly true. There have been a number of causes, as I understand the matter, intervening there. It is true that the southern cut hasn't decreased as rapidly as was expected.

1215 As to it being larger in 1926 than it was some previous years: I think not. My recollection is that there has been a slight decrease. I think there isn't a great reduction. The southern mills, while some of the larger ones went out of business, small mills went in and kept the cut up, producing in the aggregate substantially (2259) the same volume of southern pine that had been produced over a long period of years last past. As I read on the subject, it is stated that that is very largely inferior timber, consisting of second growth, small trees, and so on, and in so doing they are actually destroying their lumber industry.

On page 130, under 18, I estimate the annual imports of soft wood lumber by rail to the Pacific coast when the south ceases to export. I wouldn't venture any predictions myself as to when the Southern States will cease to be factors in the lumbering markets, the soft wood markets in the United States. I have presented here the estimates of Mr. Dunham, the engineer for the Southern Pine Association, who doubtless knows more about it than I do. He made that estimate in 1924, I believe. I had it from Mr. Charles S. Kieth, of Kansas City, and he states that Mr. Dunham's estimates were confirmed up to date, that the cut for 1924 to 1927 was substantially as Mr. Dunham had estimated it (2260) would be.

The condition of the lumber market should be given some consideration in determining whether there is a necessity for another railroad to serve the lumber producing areas of western Oregon, but the main factor is that which is already moving even under the present depressed market conditions, by reason of the economies that my study reflects.

On page 131 I have said: "The Southern Pacific statement already referred to as a part of Mr. Wiggins' exhibits shows that 18,586 cars of lumber went from Oregon points via Ogden into these States in 1926. The total lumber originated in the State by the 1216 O.-W. R. & N. in the same year was 19,426 cars. "I mean originating on the Oregon-Washington Railroad & Navigation system lines. The records show 19,500 cars originate in the State of Oregon alone. (2261.)

Q. According to those figures, you have the O.-W. R. & N. originating more lumber than the Southern Pacific in the State of Oregon; is that right?

A. Not at all. The figures 17,586 are on that going beyond Ogden; they do not include that which goes into California or goes east via the Southern line. The comparison is to all destinations on the O.-W. R. & N., and the 17,586 just went through Ogden east. In my table of traffic for the cross-State line, I used the traffic studies of Mr. Wiggins in compiling it, and the rates of charges given by Mr. Wiggins.

I determined how this traffic would be routed, so far as its haul over the cross-State line is concerned. I consulted both Mr. Wiggins and Mr. Teutsch in determining it. (2262.) I perhaps should explain that; it would be more nearly correct to say that I obtained from Mr. Teutsch his idea of the markets to which the stuff would go that he had to deal with, and I determined then what line, what part of the cross-State line it would have to move over.

Exam. ROGERS. Just a question there. Who was it determined that the Multnomah County traffic, or a part of it, would move via the cross-State line?

A. We took that as part of the traffic actually moving through Ogden, took it for granted that if it was reasonable to move it through Roseville to Ogden it was certainly more reasonable to

move it through Crane. We don't there go into the question of the possibility of diverting it via the Union Pacific. That, of course, might be done but it is not being done.

Exam. ROGERS. You didn't take into consideration the possibility of the O.-W handling it out of Portland direct?

A. Well, if the O.-W. originated it, of course they would; but this is Southern Pacific origination.

1217 Comr. MCMANAMY. And all of the traffic you have considered there moves via Roseville? (2263.)

A. All of the traffic we have considered in that light has in the past, and is to-day moving through Roseville.

Exam. ROGERS. I take it, then, you considered the Southern Pacific would handle it from Portland to Crescent?

A. Yes, sir.

Exam. ROGERS. And then it would go via the cross-State line?

A. Yes. That does not preclude, of course, the possibility of their making other arrangements at Portland whereby it might be mutually profitable to the two carriers to interchange, but they have not done that in the past. I know of no reason why I should assume they would do it in the future. It is very easily proved that it would be more economical and would cost a good deal less money to haul a carload of lumber from Portland to Granger, Wyoming, over the O.-W. R. & N. and the Oregon Short Line, than it would to haul it down through Roseville, thence to Ogden via the Southern Pacific, and then on to Granger via the Union Pacific. The difference there must be more than 532 or 533 miles; it is somewhere between five and six (2264) hundred miles; say 550 miles. The first part of the route, according to my statements, all the way through Oregon, is the most expensive operation per mile for direct cost, and from Oregon down through California, over the Siskiyous and Sierra Nevada Mountains and down to Ogden.

I haven't anticipated voluntarily that any part of that traffic would move down to Eugene and move over the cross-State line, merely from the fact that the Southern Pacific would get a part of the haul. We have asked that (2265) it be made compulsory as regards the interchange at Crescent Lake, in spite of the fact that it would actually be profitable to both carriers to do it. I have said the

1218 interchange would depend upon the interest that the carriers have in the matter if there were not interchanges established by the commission.

Exam. ROGERS. Mr. Newell, assuming that all you have said with respect to the saving and the possible divisions via Crescent Lake and the cross-State line is true, do you think it would also be possible, by the same methods, to show that an economical arrangement would also be possible via Portland? On certain of the traffic?

A. For a part of it with a less advantage, obvious advantage, to both carriers than would be via Crescent Lake.

Exam. ROGERS. What was that?

A. I say, with a less obvious advantage to both carriers; I mean, the net advantage of the compulsory division would be less than it would be at Crescent Lake on the traffic at Eugene and central western Oregon. As regards Multnomah County traffic, or Washington County traffic, what you say is true.

Exam. ROGERS. How far south of Portland do you suppose (2266) you could go with that arrangement?

A. I have not considered that specially. I don't know just how far that would work.

Exam. ROGERS. Would it go down to an equidistant point between Portland and——

A. No, no; it would be less than half way from Portland down. I mean half way between Eugene and Portland, somewhere around, possibly Salem; not out or at Albany; Albany is more than half way to Eugene. It would be a good deal more economical to haul it from Albany via Portland than it would be to haul it from Albany via Roseville and Ogden, but not more economical than to haul to Eugene and across the State line. The Tillamook branch is a large traffic producer of lumber. That would be Portland traffic, because it would come through Portland in any event, or nearly to Port-
1219 land. From Portland it comes through the (2267) Willsburg gateway; that is practically Portland. The yards of the Southern Pacific where it is hauled in and put into the main line trains are in the city limits, across on the east side of the river, at a location called Brooklyn; known for years as the Brooklyn yards.

Exam. ROGERS. The thought just struck me, Mr. Newell—I don't know whether there is anything to it or not—if compulsory, or even voluntary arrangements are going to be made, considering only the western Oregon eastbound traffic, would the logical thing be to put in two arrangements, one via Crescent Lake and the proposed line covering traffic originating in a cerain territory, and another one via Portland on traffic originating in other territory?

A. That might be true. I would think that if a compulsory arrangement were made at Crescent Lake, that the interests of the carriers probably would permit them to make a voluntary (2268) agreement at Portland, if there were any advantage jointly to them in it. The joint arrangement now in existence as regards interchange of lumber traffic at Portland is such that it is more profitable to the Union Pacific to accept the same car at Ogden than at Portland.

Exam. ROGERS. You mean the way the divisions are set up?

A. Yes; sir.

Mr. SPENCER. How is that?

A. I say, it is more profitable to the Union Pacific to accept a car of lumber now, under the present division of rates, at Ogden than at Portland, if it originates at Portland. Twenty-five per cent of that is because of the large divisions that the O.-W. R. & N. has against the Southern Pacific for the traffic on its rails in western Oregon. That is for Missouri River and east. I under-

stand it to be 25 per cent, no matter what the destination is, if it goes as far as the Missouri River. As to the small traffic that may not go that far; I am not clear about that. I have made
1220 calculations to determine that it is more profitable to receive it at Ogden than it is at Portland. (2269.) In fact it would be very much more profitable for the Southern Pacific to deliver it to the Union Pacific lines in Portland.

Exam. ROGERS. Profitable for whom, Mr. Newell?

A. To the Southern Pacific.

In my estimated earnings table, the western, southwestern Idaho traffic was not considered. On page 133 westbound, I start with Crane because the cross-State line proposed is to start at Crane.

Q. And you have 385 carloads of corn from Crane to Crescent Lake. Now that corn—you don't anticipate the growing of corn at Crane, or around Crane, or in the Harney Valley, do you?

A. I will have to look up the source of that. That was given me by Mr. Teutsch.

Exam. ROGERS. You mean whether you took the Idaho traffic into consideration depends on whether Mr. Teutsch took it into consideration or not?

A. Yes. (2270.)

Q. (By Mr. SPENCER.) And whether Mr. Wiggins took it into consideration? You used Mr. Wiggins' exhibit——

A. Well, Mr. Teutsch furnished Mr. Wiggins with all the figures relating to this kind of traffic. Mr. Wiggins applied the rates to the traffic. Then I took the traffic and the rates and made the distribution to the cross-State line. I calculated the cost appertaining to the cross-State line. Mr. Wiggins had made already the distribution of earnings to the cross-State line.

Q. I recognize, or the reference is here that the traffic in this Table 13 was prepared by Mr. Wiggins. For instance, he is shipping potatoes and apples, hay from Crane, 702 cars of hay to Crescent Lake. Now that originates over there, doesn't it—it does not originate at Crane. The hay is the hay they have been talking about from irrigation projects of Malheur County?

1221 A. Why, the tables show how that was obtained. Mr. Teutsch had estimates, not only of production of the western Oregon counties, but of their use of certain commodities, of which hay was one. Now the hay shown as moving is that going into the western Oregon counties. (2271.) And without regard to where it might originate. Where hay was shown also as a product originating in Malheur County, we left it out of consideration, because that would cause a duplication of it. Now it is true that of the hay shown in these counties some may come from Idaho. If it is shown when the Idaho figures are presented to me that there is going to be that duplication, I expect to eliminate from the Idaho production the amount of hay that has already been taken into account in the hay going into western Oregon. And the same thing would be true of corn and of wheat.

In the items, 988 carloads of cattle for the cross-State line. We don't anticipate any such number of cars as that originating at Crane itself. I take no responsibility for those figures, Mr. Teutsch has presented them. They reflect in that table a consolidated summary amounting to 3,777 cars. Of agricultural products and livestock, horses and mules, the bulk of them originating from Crane; some little miscellaneous from Fort Rock. (2272.) A greater part of that is supposed to come onto the cross-State line at Crane. That means, of course, origination in Harney County, or any point east. The originating points or producing points are Malheur and southern Idaho. But southern Idaho is not included here, except in the manner in which I state, that if some of the hay and corn going into western Oregon, and therefore included here, may be found when we get the Idaho statement to be put in as originating in Idaho. If that is the case we shall eliminate it from the Idaho traffic, because otherwise it would be a duplication. There is a possibility of that southwestern Idaho traffic being included in these tables in that manner.

1222 You will have to ask Mr. Teutsch about there being any such traffic over there in Harney County as 4,000 cars. I have taken his figures.

Q. Now on top of that, take the traffic—well the third year is doubling up of the proposition there. You get up to 4,628 cars from the same origin? (2273.)

A. Yes.

Exam ROGERS. Mr. Newell, did you take into consideration all the traffic that Mr. Wiggins took into consideration in the preparation of these exhibits 26, 27, and 28?

A. Well, I have not even seen his exhibits, but I suppose that they contain just the same traffic that I have used. That is, I saw the figures from which he made it up into exhibit form; and I relied on those figures in making my tables and computations.

Exam. ROGERS. What I have in mind is, I have here Mr. Wiggins' explanation, and he said, "By separate exhibit of three pages, tonnage and revenue calculations are shown for the movement of the ten southwestern Idaho counties via the cross-State line, on the same basis that we used in the Oregon traffic." I am just wondering whether you took those into consideration or not?

A. I had an exhibit prepared in which to take into account the figures which he there names, refers to; then it appeared, from what I was told here of what other witnesses had said, that there was some confusion as to this Idaho traffic, and we wanted to straighten that out before my figures were finally put in, and that is the reason my figures were not presented, in order to determine if there has been a duplication there. (2274.)

Exam. ROGERS. This morning when you answered Mr. Spencer and the commissioner about the justification of this line, did you have in mind that southwestern Idaho traffic?

A. Yes; knowing approximately what it will be but not
1223 having the figures prepared so that they could be properly presented as an exhibit.

Exam. ROGERS. Well, I took it from your answer to the commissioner that when you talked about the line being justified without the western Oregon traffic, that that totally ignored the southwestern Idaho traffic?

A. I did not intend to be so understood.

Q. (By Mr. DEY.) Mr. Newell, in your report prepared in 1925 and introduced in the so-called Klamath Basin cases as Exhibit 56, at page 13 you state, under the title "Proposed transcontinental routes to serve central Oregon," Item I, the following: Westward from the end of the Crane branch of the Union Pacific the proposed road would pass for about 50 miles through a lake country, with large marshes and irrigated hay ranches, and bordered by extensive stock ranges. This country is capable of producing a great many cattle, but production is now restricted on account of the lack of transportation." Is it in that 50 miles that Mr. William Hanley's land (2275) is located?

A. Part of it is, at least. I don't know where his holdings all are, but part of it would come in that. That is the district I have in mind, the Harney County stock raising district. I did not hear Mr. Hanley's testimony.

Q. And then you continue as follows: "Eastward from the proposed connection with the Southern Pacific"; that is at Crescent Lake, I assume?

A. Yes.

Q. "The line would traverse about forty miles of pine forests, and would then pass for twenty-five miles through the Fort Rock Valley, a large part of which has been shown to be capable of irrigation. "That pine forest that you speak of forty miles east of the Southern Pacific Company's Cascade line is fairly well served by that line, is it not?

1224 A. Yes, but more particularly by the new Great Northern line. That is, since this report was prepared we have also the Great Northern extension from Bend, in Deschutes County, to Chemult, in Klamath County, which lies some (2276) twenty miles east of the Southern Pacific Cascade line right through this forty miles of forest. The distance of forty miles does not quite describe it as it now is. The junction point is now expected to be further west than I thought at the time. Probably it would have been nearer correct to have said fifty miles from the junction, because now with the Southern Pacific location, after further study in the matter I concluded that the junction would have to be further west—should be—than I had thought proper in 1925.

But what you say is substantially true, that the Great Northern line coming down through there enables the greater part of that timber to be reached. It would be a question of its shorter route to its market after it was cut. There is no special need of any of these

railroads through there merely for the purpose of logging roads, as far as that is concerned. Their utility is for outlet of the finished product. The loggers themselves can attend to the logging roads that will reach the trees and get them down.

Q. But it is a fact, or do you know whether or not it is a fact, that timber is now being logged out of this very forty mile belt, and being transported by the Great Northern in logging trains to Klamath Falls for milling? (2277.)

A. Well, I have not been up in there.

Q. Or to the mills in the Klamath Basin?

A. I have not been in there since the Great Northern line was finished, so I don't know what they are doing.

Yes, I made a timber study of practically the entire State, which I introduced in considerable detail in the hearing of the Klam-
1225 ath Basin cases. It is quite possible the main portion of this timber belt, extending fifty miles east of the Cascade line, will be milled either by the Bend mills or at the Klamath Basin mills. I think likely that some other mills might be established in some other sections. I would not say that there would not be. (2278.)

I would think that high territory along the Cascade line north of the junction between the Great Northern and the Cascade line would be a natural place there for milling, where the Williamson River comes into Klamath Marsh. I think they might get that far north. I don't remember now; I think that is a little farther north than Kirk. I don't look for the establishment of any large mills on the proposed cross-State line where it passes through this timber belt. I think there would naturally be mills in at Silver Lake to reach that territory, and a short spur from the cross-State line. Only a few miles would bring that in and make that the natural outlet, I think, for that much of the territory.

As to including in this timber belt forty or fifty miles east of the Cascade line of the Southern Pacific, the Silver Lake timber, I merely said that the timber belt extends out through there. It extends both north and south from the cross-State line. The Silver Lake timber would be more easily reached by the cross-State line than by any other.

The Silver Lake timber is included in this belt (2279) that I mention here. It extends all the way along there, as the map here shows, and as that photographic copy shows, all the way both north and south along there, and in a fairly uniform line, extending out as far as Silver Lake, and as it goes further south extending still further east.

In proceeding as follows: "The remaining 65 miles is barren and has no present prospect of producing traffic, except that about twenty miles south of the line there are large mineral
1226 beds, which were shown in the Central Oregon Railroad case to contain very valuable deposits." By mineral beds, I mean the soda deposits of Alkali Lake. But I certainly would not make

the other statement about the barrenness of that country, after having seen it. I had taken the testimony of the railroad witnesses as regards the character of that country in the Central Oregon Railroad case, and I don't consider it correct now. My judgment of that country is quite different, after having been through it and having seen it. In other words, I want to change this statement that I made in 1925 as to the barrenness of that remaining 65 miles. After having been over the country and seen the character of the soil and the prospects of water for domestic uses, I certainly would not make that statement now. (2280.)

This is the so-called High Desert country that the witnesses have spoken of. Some of the best range country I saw anywhere out in central Oregon in an extended trip. I was there last October. We started out from Crane westward, along the south side of the lake and out to Mr. Hanley's ranch, and then from there out following as closely as the road would permit the location of the cross-State line, out to Wagontire, south to Alkali Lake, back up along the Wagontire Mountain through the valley there, near the eastern end of the Christmas Lake Valley, and back to the Bend road. I had previously been out through the Fort Rock country and Christmas Lake Valley, out beyond the Ernst ranch a little ways.

Including this 65 mile stretch and including Fort Rock Valley of 25 miles, that would make 80 miles of territory in which there is now substantially or practically no production. (2281.)

1226½ Q. I take it from your testimony in the present case that your statement shown on page 21 of your study prepared in 1925 still holds true, which is as follows:

"No scheme for the development of central Oregon can be considered complete or satisfactory without the direct route east, but the cross-State line cannot be built if it is to stop at Odell Junction without any further provision for reaching the traffic of central or western Oregon. It must have joint use of all the lines now proposed in Klamath and Lake Counties."

By that you mean it should have joint use of the Great Northern proposed line from Bend down to Klamath Falls?

A. Well, I would say now that it ought to have joint use of those. I do not believe now that it is a necessity.

1227 I made a suggestion at that time that "The Willamette Valley has already more than sufficient railroad mileage for the territory served, and it is important that there be no further duplication. I suggest that the Union Pacific should be given joint use of the Natron cut-off from Odell to Eugene, and of the Southern Pacific lines between Eugene and Portland, excepting the main line." I don't know that I would follow that up now. I merely made it as a suggestion. I am not sufficiently versed in these matters, I think, to urge that kind of an arrangement (2282), though I believe it would be a wise one.

At that time, I represented myself as correctly as I could, in transportation affairs, laying out a scheme of railroads for central and

south central Oregon. I didn't take upon myself any qualifications that I thought were not justified.

Exam. ROGERS. Have you changed your opinion, Mr. Newell, as to the rail facilities in the Willamette Valley as expressed there?

A. As regards the country served having more than sufficient mileage I have not changed my opinion.

Comr. MCMANAMY. How far south do you consider the Willamette Valley extends?

A. Practically to Eugene.

Comr. MCMANAMY. And did you express any opinion at that time, or do you care to express one now, as to what should be done with the territory south of the Willamette Valley?

A. I did not express any opinion then, and I would only express the opinion now that there is much territory in there which
1228 can be developed. I do not recommend any compulsory action on the part of the commission toward any carrier, but only that there are great possibilities in there for the extension of roads to reach territory not yet served. (2283.)

Again referring to my study of 1925, Exhibit 56 in the Klamath Basin cases, to which were attached several maps or drawings labeled "Plates," and referring to Plate No. 4, "Map of Oregon showing standing timber, railroads and proposed extensions," the compilation made at that time as shown upon this exhibit was made from the best sources available to me, and my judgment then was fairly accurate. My judgment as to the accuracy of that exhibit still obtains.

In the Silver Lake district of Lake County, or some few miles below it, is a block labeled 1,600,000,000 feet; that is supposed to show all of the timber in that locality; that is the timber lying in there practically within the drainage area of Silver Lake. That about marked its limitations. All of that timber would best be milled around Silver Lake, if there were an outlet east by a short route from Silver Lake; not under the present conditions. Under present conditions (2284) I think it would eventually be hauled probably into Klamath Falls, or, more likely, down the Sprague River to be milled. It is practical to handle it that way. It means an uphill haul for a considerable part of it, where the other would mean a downhill haul. With equally good facilities for milling, and outlet, it certainly would go to Silver Lake. But it is not anything impractical to take it to Sprague River or Klamath Falls.

I have no doubt that the control by ownership of the timber would have a good deal to do with where it was milled, on the milling conditions and of course the rail conditions also. If it were controlled by mill operators in the Klamath Basin, that is most likely where it would go; not necessarily. Of course they
1229 might find it advantageous even to set up new mills and mill it elsewhere, if the advantages were sufficient. It would not be possible now to answer that question with any certainty. I say it would be certain that would happen if there were no outlet to

the east, but I am inclined to think even those owners might find it to their advantage, even, with mills at Klamath Lake, to mill at Silver Lake, if there were this short outlet east. But I could not say that with certainty, of (2285) course. All kinds of conditions would enter into that. I may say that no claim of traffic from this territory has been set up in my figures.

A certain portion of that 1,600,000,000 feet of timber in the Silver Lake district is Government timber. I think it is only as it is Indian reservation timber. I am not certain whether there is national—oh, yes, there is some national forest timber also. That includes all the timber in Federal ownership as well as the privately owned.

I could not answer as to whether that 1,600,000,000 feet of timber which includes everything in Federal ownership and in private ownership in that district would justify the investment in any extensive milling operations around Silver Lake, taking into consideration the definitely established policy of the Forest Service with respect to selective cutting and sustained yield, but of course I would point out there that any mill at Silver Lake would also have access to these other blocks of timber, although not on the same advantageous situation. They could reach over those same ridges there and reach that block of 7,800,000,000 shown to the westward, and some of that 4,300,000,000 to the southward. In this (2286) map here I merely attempted to show each main district in one solid block, timber which is scattered all over it. It is not like this map here before us, where that is shown by the township.

1230 They would have to reach over the ridges and pull it over into the Silver Lake drainage; just as the other mills would have to take that 1,600,000,000 and pull it in the opposite direction. The ridges are high but they are not particularly step right at the top. It is high country. It can be reached, most of it, on two or three per cent grades, which are not considered anything for logging roads.

I recall in the Klamath Basin cases it was agreed that the timber in the extreme northwest part of Lake County would probably be milled over at Bend. In giving direct testimony as to the stand of timber in western Oregon (2287) I certainly didn't say that the timber of western Oregon is practically under the exclusive service of Southern Pacific lines and is only skirted by other lines. It is not exclusive. I said it was tributary to the Southern Pacific. The Southern Pacific is at least on equal terms with practically all of that timber. Some of it is on much more advantageous terms than any other carrier to carry it; other parts of it, other carriers are in equally advantageous position. That is not all the timber along the west coast of Oregon; it did not include Clatsop and Columbia Counties. Referring again to Plate 4 of my study prepared in 1925, it shows in Clatsop County 5,500,000,000 feet of timber, none of which is within striking distance of Southern Pacific lines; and none of which did I include in my statement in this case.

That will clear up any question about my statement including the entire west coast of Oregon and that timber belt lying therein. In other words there is 5,500,000,000 in Clatsop County that is reached only by the Spokane, Portland & Seattle Railway, which is owned by the Great Northern and Northern Pacific (2288) fifty per cent each. In Columbia County the same statement is true with respect to 8,250,000,000 feet of timber; in western Oregon, that is correct, and in Washington County we have 5,100,000,000 feet
1231 of timber, Washington County adjoining Multnomah County here, which is served by the Northern lines' subsidiary companies as well as by the Southern Pacific and is included in my statement of the timber tributary to the Southern Pacific. (2289.)

In Linn County I showed 24,900,000,000 feet of timber in my 1925 study and that figure is included in the figures I gave here the other day. The Oregon Electric, which is owned jointly by these two Northern lines, has a line through that county, and it is reported in the papers that it is that company which is extending a line out into the timber which is included in the 29 billion feet. It is so reported in the papers that it has purchased rights of way and has applied to the Interstate Commerce Commission for a certificate.

In Lane County, forty odd billion feet shown in my 1925 study is also included in the figures I gave here of western Oregon timber. The Oregon Electric runs through that county as far as Eugene. I know of no logging roads, however, that it has by which to reach the timber. But there isn't any serious difficulty (2290), that I know of, there, when the occasion demands, for the Oregon Electric in Lane County doing exactly what it is now doing in the adjoining county of Linn.

I would naturally expect that this timber that is tapped by the subsidiary line of the Northern lines in the Willamette Valley will move east over the Great Northern and Northern Pacific. I haven't compared their lines. I wouldn't say very much more circuitous. I think somewhat longer than the cross-State line. I haven't the mileage figures before me to make an accurate answer to that. As to it being longer than the Columbia River route of the Oregon-Washington Railroad & Navigation Company, Oregon Short Line, and Union Pacific, or as long, my recollection of comparative figures that I have made is that the Northern lines from Portland to Chicago are practically the same length, very nearly the same length, as the Union Pacific line and connections.

1232 Q. Now, why haven't you included in your study and plan (2291) for the present case that traffic to support the cross-State line? Because Mr. Wiggins didn't do it, is that right?

A. No; not Mr. Wiggins' responsibility. In the first place, that traffic has not yet begun to move, if you are talking now of the Oregon Electric and its collections of business, and I know of no means by which that could be compelled to be diverted to the cross-State line nor any showing of economies to result from it which

would justify an attempt to get it ordered that way. The Oregon Electric has been built into the Willamette Valley for a great many years. I don't understand that it handles a very substantial traffic to be the fact. They complain bitterly that they can't make enough to live.

On the principle that I contend for, that the shorter route should be used for handling the traffic in order to accomplish savings, there is very marked distinctions between the northern lines going into the Willamette Valley and hauling traffic out of there across the continent, on longer routes than the cross-State line, on the one hand, and the Southern Pacific Company doing the same thing out of the same traffic area. (2292.) One is the question of degree. The Southern Pacific hauls that out of there on very much more circuitous routes. Further, the northern lines would take it into territory not reached by other lines at all. Now, I don't know that they would haul that timber out of that territory into Chicago and east. Doubtless they would send much of it into the markets in the Northern States for which their routes would be the shortest rather than the longest.

Doubtless that line will compete in western Oregon for business to Chicago and these other points that are reached by the other routes, when it is completed, compete in some degree for that traffic, but as I recall the figures it is a much shorter line than the Southern Pacific's route to that territory, much shorter than
1233 the Alturas route; that is my recollection only. I haven't looked it up recently. Then, I think there is this difference that ought to be pointed out, that in this case what we are asking to be dealt with is traffic originated by one carrier and handed to another, and we are merely proposing a different point for that exchange whereby the (2293) haul will be very distinctly shortened.

The principle I am trying to establish and the end I am trying to reach is economy of operation, for one thing, and service to territory not yet served made possible by the observance of that economy in the long-distance haul. Now, that is made less difficult, has less disturbance of relations one carrier to another, when it involves only a change in the point of transfer between the carriers, than it would if it were a matter of compelling one carrier to give up a haul half way across the continent to another. Now, that would involve more difficulties of adjustment. The desirable principle to observe is the same, that is, that the traffic moves by the most economical route.

Q. Well, then, because the Southern Pacific happens to connect with the Union Pacific at Ogden, and the northern lines don't, you think it is more justifiable that its long haul be taken away from it and the other people be left with theirs?

A. It is more difficult to make adjustments which would be required to take it away from the other lines, more distrubing conditions and possibilities of injustice. (2294.)

On my Exhibit 17, which is a map showing the timber quantities designated by stars, it is the intention that those areas where I have put stars I have represented all the standing timber, and it is the timber as estimated or determined by various means by the assessors. It doesn't purport to cover all the timber in the State, but in the areas where stars are shown at all it purports to cover all of the timber as the assessors find it.

Exam. ROGERS. You are referring now to Exhibit 17?

1234 Mr. DEY. Yes.

A. The estimates are sometimes quite different from those of the State forester which were used in the other exhibit to which you referred.

When a new line is turned over by the construction department to the operating department the maintenance is frequently considerably heavier the first two or three years than afterwards. It is likely in all cases to be somewhat heavier.

Q. On page 62 of your Exhibit 16 in this case you say, "The country to be traversed by the cross-State line is (2295) similar to that occupied by the Oregon Short Line, except that it is somewhat less mountainous. Maintenance, therefore, should not cost more than an the Oregon Short Line, and I put it at the same amount, and use the same figure of 16.5 cents for the gross ton-mile." Shouldn't that be modified, then, by the—qualified by the suggestions that I have just made, that the maintenance on any new line, so many things that have to be attended to and taken care of, that for the first——

A. For the first year or two that might be the case, but I think it is sufficiently balanced by the statement that it is somewhat less mountainous country, and that, therefore, normally it wouldn't be quite so much, but that for the period covered it shouldn't cost any more.

Q. On the same page you say, "Operating conditions on the Southern Pacific and the O.-W. R. & N. lines in Oregon are so nearly alike that I attribute the marked excess of the former in fuel and trainmen to the much greater amount of branch line mileage on the Southern Pacific. These differences will not exist in a comparison of operation over the Southern Pacific from Eugene to Klamath Falls with that over the proposed cross-State line." Now, you are talking of the items of fuel and trainmen, and you are dealing with the line from Eugene, where they make a climb of over four thousand feet up the Cascade Mountains on a 1.8 grade for

1235 a (2296) large part of the way, and do you think it is quite fair to say that the amount of fuel used over that piece of track will not average up a whole lot greater than the average of the Oregon-Washington Railroad & Navigation Company lines in Oregon?

A. I don't say that. What I am referring to here is my unit cost. My contention is that it won't cost any more to produce the energy required to lift one ton one foot on the Southern Pacific than the

average of the similar cost on the Oregon-Washington Railroad & Navigation Company lines, but in that operation you speak of there are a great many more foot-tons required, and that is taken into account in my detailed compilation by applying that unit cost to a much greater number of foot-tons.

In the table that I have prepared showing costs and savings, and particularly savings based on traffic, page 105 of my Exhibit 16, has no reference to these tables being based upon the assumption on my part that the Alturas line will be completed three years after the cross-State line is in operation. I think you must have given me the wrong page. (2297.) I have some tables there showing eastbound business from Klamath County. I have shown what would be the result, possible earnings, in the comparison between the cross-State line were to be made only with the Roseville line for three years. After that time, in my first presentation, I assume that the Alturas line is then built and in operation and show what the earnings would drop to.

And I present another statement in which I have shown that the Auturas line is in operation to begin with, and make the comparison with that solely. In view of the present situation, as I understand it, that depends, of course, on whether the road is now going to be built,

if the set of figures which I have prepared should be taken into
1236 consideration now. I don't know whether it is or not. Assuming that it is completed and ready for operation May, 1929, then your statement holds good. (2298.)

Q. (By Mr. Dey.) On page 138, on the item of taxes, would you think, Mr. Newell, that the taxes on this proposed cross-State line would be higher or lower than the average taxes per mile of the 1,400 miles of the Southern Pacific lines in Oregon, including the cheap branch lines with the main line?

A. I don't know what those taxes are, and I hadn't thought of it in that light at all.

Q. Well, they are about a thousand dollars a mile, and don't you think that your cross-State line will be taxed per mile at least an average of the taxes now collected from Southern Pacific lines in Oregon, including all branch lines, as well as main lines?

A. I haven't made any particular study of that. I believe that there is a tendency to hold the assessments down somewhat on new lines. I don't know whether that is law or human nature, but I think, as a matter of fact, that they are generally or lightly taxed as new lines. I can't say, I have given the source of my estimate here, that that is about what the Oregon-Washington Railroad & Navigation Company pays, and I have applied that figure here. It may be that you are right. I couldn't determine that. (2299.)

If you are right, and if that average that the Southern Pacific pays now, eight million five hundred thousand dollars a year on fourteen hundred miles in this State, that would be a little over a thousand dollars a mile, and would run the taxes up to at least $189,000.00 on my 189 miles, but I could hardly think that would be

an applicable figure, because surely a very large portion of that tax would be applied to terminals and main line, which is a line of higher class, higher-class construction, certainly, than would be required on the cross-State line. I would certainly think it wouldn't come up to that average under any circumstances.

1237 I wouldn't expect the cross-State line to be a better line than a lot of these Southern Pacific branch lines in Oregon, of which there is a great mileage, but I think that probably no better than some of them.

Q. Well, what, for instance, what Southern Pacific branch line would you figure on duplicating across the central Oregon territory, so we can get an idea of about what kind of railroad you have in mind?

A. Well, I hadn't even considered it in that light. I think the Coos Bay line (2300) or the Tillamook line would be a fair sample. I believe that either one of those would be a good average, between our branch lines and main lines.

I have never had any experience with the State Tax Commission, as to their attitude on new lines, such as the new Natron-Cascade line, in the matter of taxes.

Q. Now, you were speaking this morning of that part of Oregon which could find a shorter route through the Portland gateway than by way of Crescent Lake, and would you say that it was fair to take that part of Oregon which is served by the Southern Pacific, fair to take Tillamook County, Washington, Multnomah, Clackamas, Yamhill, Marion, and Polk Counties as being nearer to the East, nearer to Ontario by way of the Oregon-Washington Railroad & Navigation Company Columbia River route, than by way of the Cascade line, in actual mileage? (2301.)

A. Well, certainly the first named counties that would be true, but it is a matter simply of fact to be determined by cancellations of mileage. I don't like to express an opinion on it off hand. As regards those other counties, I would have to figure it up and see. It would be doubtful about Marion and Polk. I think it would be a slight difference in favor of the Portland route from Yamhill. As to whether there would be very much doubt about Marion County if Salem were the equidistant point; I didn't say that Salem was the equidistant point. It is about there, but I hadn't figured it up. I don't like to say.

1238 Until the Alturas line is put in operation, I expect a portion of the Rogue River Valley pear crop, and perhaps some other commodities from down there to move over this cross-State line, and after that (2302) I haven't counted on any of them moving over the cross-State line, although I think, as a matter of fact, it would prove to be a cooler route and there probably would be some move that way, but I have made no claim that any would in the figures I have presented.

Exam. ROGERS. Do you think the ore or lumber or timber, or commodities not affected by temperature, would move over the cross-

State line after the Alturas route is completed, from that Rogue River territory?

A. I think that undoubtedly some of it would, because in general these things are governed by temporary conditions, so some of it would that go, but I wouldn't present it as having any advantage for that route for the through traffic. When I say "that route," I mean (2303) the cross-State line over the Alturas line, from Jackson and Josephine and Klamath Counties. I think there would be, as a matter of fact, a slight difference, but not enough to insist upon it as the probable route of movement—a difference of 40 miles or such a matter.

As to how this fruit is handled now, with respect to what service is given to it to the East via the Southern Pacific lines, I do not know in detail. It so happens that I have heard very little testimony in any of these hearings, and none whatever in this case. I know that this fruit is seasonal, these pears are all shipped out over a period of a couple of months.

Q. And they move in train loads down to Roseville, or certainly in large blocks to Roseville, and there it is coordinated into similar blocks of California fruit moving east, and it is given very expedited service?

A. Well, I know that is the general way it moves. As to
1239 the quality of service, I know nothing about it. (2304.)
That service undoubtedly costs money. I think it would unquestionably follow that the pear crop would be divided up and have the carriers maintain a duplication of such expeditious service through this other route across the desert, because all of western Oregon needs that kind of service, and with it provided by that shorter route I think there is no question but that it would grow.

Comr. McMANAMY. Before we get too far away, how did you have in mind the traffic from Jackson and Josephine County reaching the Alturas route?

A. By way of Black Butte, then northward to Klamath Falls. Down into California, to Black Butte. Up to Klamath Falls, then over the Alturas route. There is an expectation there in that territory that that Butte Falls line will be completed, and that, of course, would then furnish a still shorter route.

As far as quality of track is concerned, I think you could make the time that is necessary for the handling of this over a branch line such as the (2305) Tillamook line that I have described.

Exam. ROGERS. Mr. Newell, while we are at this point, maybe it would be a good place for you to tell us what sort of service you contemplate across this line. There has been considerable mention of your position here, that it would be branch line, and the assumption was indulged in that you would therefore have branch line service, that that is what you have in mind.

A. The question of economy service on a branch line isn't altogether due to the fact that it is a branch line. It is a question of

volume of traffic. This would be, as far as the volume of traffic for which I have figured, there is no reason why the service there shouldn't be practically equivalent to main line. It would be connected at both ends. There wouldn't be this matter of hauling empties in the entire length of line in order to get the loads in every case.

1240 Exam. ROGERS. There has been an assumption that put to several witnesses here that if they had train service three times a week across this branch, as they do have on some other branches, what the value of it would be. What is your thought on that.

A. No such traffic as I have figured here could be taken care of on that basis, the main point is that it (2306) would move in large trains; it wouldn't be confined through the necessities of giving local freight service to trains to hauling much less than they could haul. From that standpoint, the fact that the country is uninhabited is really an advantage, because there is no service required in there for the purpose of taking care of the inhabitants who might be just passenger service or frequent freight service; it would simply be a question of loading up trains and sending them through. Of course, when it came into the handling of the refrigerated stuff, that would have to have volume sufficient to justify the facilities necessary for taking care of it, and I think Mr. Teutsch has shown the possibility of that kind of traffic sufficient to justify the assumption that it would be provided.

Q. (By Mr. DEY.) You think, then, a branch line such as the Tillamook line, so far as track is concerned, the standard of track, character of track, would be sufficient to enable any such carrier as may build it to give the service in the Rogue River Valley by that route that is afforded by the Southern Pacific route through Roseville to the east?

A. You say the Tillamook line—I haven't been on that for some years, and I don't recall very well what its track standard is. I would say that such a line, such a track, as that of the Coos Bay line, over that smooth, dry country of central (2307) Oregon, with moderate curves and grades, would be sufficient to take care of that traffic. Considering the shortening of route that would occur as between here and the line through Roseville, I would say that this can be moved from the Rogue River Valley down to Black

1241 Butte, then back into Oregon, up to Crescent Lake, then across the high desert, through the curves and windings of the Malheur Canyon, over such a line as our Coos Bay branch, and the shipper can be given a service that we give him over the existing main line divisions between here and California. Undoubtedly on that hundred miles there between Crane andn Vale, some such a distance through that Canyon, there would be some slow-speed line, but I don't think that is perhaps over 50 or 60 miles to which that would apply.

Q. That would involve a transfer from a main line to a branch line of different ownership and operation at Crescent Lake, to the main line of the Union Pacific——

A. Well, I wouldn't consider that a branch line across there. Its operations would be practically those of main line, with that volume of traffic, and connections through at both ends.

Icing facilities, and that sort of thing, would have to be established where necessary, of course. (2308.)

Of course, those questions are on the assumption that the Alturas line is not yet finished when the cross-State line is finished.

Q. It is conceded, I understand, that all this Rogue River traffic should move over the Alturas line when completed?

A. No; not conceded that that is the best way for it to go, but that there isn't sufficient difference to justify any attempt to compel it to go otherwise.

Redirect examination:

Q. (By Mr. McCULLOCH.) Mr. Newell, in mentioning the pear traffic from Jackson County, Mr. Dey asked you a question based on the assumption that that traffic would move south to Black Butte, then north via the Cascade line to Crescent Lake, and then east via the cross-State line. Do you know how the distance of getting—

1242 distance would compare of getting to the cross-State line from Jackson County by going down to Black Butte and then north to Crescent Lake, or, on the other hand, of going north from Jackson County to Eugene and then to Crescent Lake? (2309.)

A. As I recollect, it is almost an even break. The distances are almost exactly the same, I think. To get to the cross-State line, pears might move south to Black Butte and then north to Crescent Lake, or north from Jackson County to Eugene and then over to Crescent Lake. The probabilities are that the facilities will be more easily furnished on the latter route.

As to the character of service I would expect over the cross-State line, when built, I would expect that on such grades and in such a country as that it would be no trouble to maintain tracks capable of carrying heavy trains, that the service would be mostly of such a character that the freight could accumulate to the point of sending trains out fully loaded. There would be no occasion arising through the necessities of serving anybody along the line that would call for any particular frequency of service. It would be practically a full-train movement across there. The track, of course, ought to be built of such a character as the circumstances would apparently justify, and that, I think, as a matter of economy, would call (2310) for a fairly good track to start with.

As to the standpoint of total cars in a train, the situation on the Oregon-Washington Railroad & Navigation Company main lines in Oregon, I have found an average of about 56 cars to the train, as

full-train movement. I contemplate that such trains could and would be moved over the cross-State line.

With respect to the continuity of the service, an intermittent service such as has been testified is given on the Rogerson-Wells line of the Oregon Short Line, where it has been testified here that the service is two or three times a week, no such service as that is expected on the cross-State line. My figures of eastbound traf-
1243 fic for the first year amount to about 33,000 cars, that would be a matter of a hundred cars a day, or something like that, to send out, nearly two full trains every day, eastbound. (2311.)

I would expect the service on the cross-State line to differ from the service on the Oregon-Washington Railroad and Navigation Company main line between Ontario and Portland in that I wouldn't expect any passenger facilities of importance to be necessary, but as far as the shipper is concerned, I would figure that the freight service would be practically the same, that is, that trains would go through at reasonable speed, and, of necessity, with such frequency that the shipper would be fully served.

Q. Mr. Newell, have you made any calculations, or could you give any estimates, of whether the northern Oregon counties in the western part of the State, like Multnomah, Clackamas, and Yamhill, would be nearer to Missouri River points like Omaha, from the standpoint of cost of service, direct cost of service, via Portland than they would be via Crescent Lake?

A. Very nearly the same. Out of Portland itself, and what must pass through Portland, my recollection of my figures is that the cost would be a little less via Portland, and Portland would be the most northerly point I could take to compute the respective costs. As you go south from Portland (2312) the difference would become more and more in favor of the Crescent Lake route.

Exam. ROGERS. You don't know what the situation is as to congestion in the Portland terminals now and the last—oh, three or four years?

A. As effects the eastbound traffic?

Exam. ROGERS. Yes.

A. I don't know of any that makes any trouble. (2313.) I haven't studied the terminal situation in that respect. All these years I have been working for the county commissioners, none of those questions have taken up the question of congestion. I don't know of any congestion as regards eastbound operations. I
1244 have said, and I think it is true of any large terminal, that the tendency is that it costs more to put through that terminal than it does smaller terminals, if for nothing else, longer distances to move the cars. If that be the fact, whatever effect there might be on the comparative advantage or disadvantage of routing traffic originated by the Southern Pacific in the northwestern counties of Oregon, like Multnomah, Tillamook, Clackamas, and Yamhill, via the Portland gateway on the one hand, and via the Crescent Lake gate-

way and the cross-State line on the other to eastern point, would I imagine, be a (2314) small difference against the movement through Portland, and I do not think the difference would be large enough to be a controlling factor at all.

Q. Yes. In your Exhibit 16 you made some specific recommendations that were based upon the assumption that the Union Pacific system lines would be required to build its extension from Crane to Crescent Lake. Have you any other views now to express, or recommendations to make, with respect to what carrier or carriers ought or might reasonably be required to join in the expense of constructing this cross-State line; particularly in the light of questions that have been asked you by carrier counsel this morning?

A. I didn't choose that method of presentation because I thought it was of any particular advantage to the interests of the State to have the Union Pacific build to Crescent Lake, but in the first place, because I understand that it has always been regarded as territory that the Union Pacific expected to develop if anybody did, and that they wouldn't wish another carrier to invade it. Also, the method of presenting it, as the construction of one carrier made it somewhat simpler comparison than to attempt to specify the divisions that might be made, and, further, because it was rather a more difficult method to present and maintain the point that I expected would be shown by it. You observe here (2315) that I have figured here on quite liberal divisions of this traffic to protect the Southern
1245 Pacific in its earnings through Alturas, if and when that route were built, and if it had the earnings of the line as far as Crane, or if the junction were made at Ontario, I think the showing would be more favorable from the standpoint of what we are trying to prove here, because of the natural earnings that would fall to the Southern Pacific for the haul across that distance, and the Union, of course, would accept it there and would have terms that were more favorable than its acceptance at Crescent Lake—at Ogden. I think that from the standpoint of what the commission is trying to prove here we would make a better case on the assumption that the Southern Pacific were to build the line to Crane and operate to that point, or even take over the line as far as Ontario and make that their junction.

As to giving any consideration to the possibility of the Great Northern Railway being required to join in the expense of the construction of this line and to use it when built as part of its system in the State of Oregon; I can see no objections to their doing it if they wanted to. I don't quite see where advantage would come to them out of their doing it, such as that there ought to be any force brought to bear on them to induce them to.

As to the advantage from the standpoint of competitive rail (2316) services to the territory traversed by the cross-State line would accrue from its construction by more than one system of railroads, instead of alone by the Union Pacific system lines, say by the Southern Pacific and the Great Northern along with the Union Pacific system

lines, I presume there would be some advantages to them in the competition between the carriers to get their business. I don't know whether that would be a matter of importance or not.

Undoubtedly if the Great Northern were one of the carriers required to join in the construction of this cross-State line, that that circumstance would have bearing on the greater utilization of the cross-State line for the movement of lumber traffic originating both at Bend and at Klamath Falls; they would reach
1246 some territory, they might originate freight going into territory where they could utilize the cross-State line, and, of course, then would have the advantage of that much longer haul to themselves. They do not, I think, now reach much territory already with their own lines such that they could divert the traffic to any advantage here, because of short-hauling themselves, but they would undoubtedly get some traffic that they would want to take over such a line. (2317.)

Comr. McMANAMY. How far would they take it, do you know?

A. Well, to Crane, that would be all, if they joined in building it that far.

Comr. McMANAMY. And that would necessitate some sort of a terminal at Crane?

A. Yes; there would have to be some sort of a division point there that would permit of interchange of traffic.

As to whether I have any information about how the lumber traffic of the Oregon Electric compares in volume with the lumber traffic originated by the Southern Pacific in the western Oregon. (2318.) Not as Oregon Electric alone. I don't recall whether the S. P. & S. reports would give the Oregon Electric as a subsidiary or not. The S. P. & S. figures are given on page 131. It is my understanding that the Oregon Electric handles very little lumber now. The S. P. & S. figures shown on page 131 of Exhibit 16 include all of the traffic originated by the S. P. & S. in the State of Oregon, including the Astoria line, where they would get most of it. I believe there is a substantial volume of lumber and forest products originated by the S. P. & S. on its line between Portland and Astoria and Seaside. If you will notice the way that is worded there on page 131, I have taken for the O.-W. only the lumber originated, but I took for the S. P. & S. what it and its connections handled. Now those connections would be the Oregon Trunk and the Oregon Electric. My figure of 16.379 cars would include everything
1247 originated by the Oregon Trunk and the lumber it originates from the Bend Mills, and everything originated by the Oregon Electric in the Willamette Valley, as well as the lumber originated in the lumber mills on the line between Portland and Astoria and (2319) Seaside. I suppose that would include the traffic originated by the subsidiary of the S. P. & S. at Vernonia, the Oregon American Lumber Company there; The United Railways and The Central Coal & Coke Company.

Q. Now Mr. Dey asked you a question or two based on your report of 1925 introduced in evidence in the Klamath Basin cases, in which you had suggested common use of certain lines of the Southern Pacific in the Willamette Valley by the Union Pacific, and you explained that you used the words "Willamette Valley" in that sense as extending south to Eugene. Now in your study and testimony in this case have you substituted any other suggestions or recommendations for that suggested common user that you made in 1925; if so, what is the substitute?

A. I have substituted here the recommendation as to the interchange at Crescent Lake under rates and divisions that would protect the Southern Pacific, and at the same time be profitable to the Union Pacific. No question of common user has (2320) been raised, I believe, in this case. I do not understand that the petition calls for any such.

Q. Mr. Newell in that connection did you have in mind that the petition in this case had suggested common use by the different carriers to the extent prescribed or ordered by the commission, of the new line, the construction of which the State commission is asking for here, namely, from Crane to Crescent Lake? Did you have that in mind?

A. Well, I didn't know that that had been suggested in the petition. I have not treated it as a line to be operated by any one but the Union Pacific, and on the assumption that the Union Pacific solely were required to build it. The petition is broader in
1248 that respect than my answer was and I didn't have that particular allegation of the petition in mind in making my answer.

Exam. ROGERS. Do you think, Mr. Newell, that the substitution of common user of the extension between Crane and Crescent Lake would serve as a substitute for common user of the Natron cut-off; say, between Eugene and Crescent Lake?

A. No; I don't think it would. The idea of common user there was as a means of permitting the Union Pacific to come within (2321) reach of the traffic of the Willamette Valley and have a chance to solicit and obtain it. Now I have substituted here the recommendation of a compulsory interchange under conditions shown to be practicable. And as regards the use in the other direction, I think, as far as I see the problem, it would be a question simply of the interest of the carriers.

In 1925 in connection with my report on proposed railroad extensions to the Oregon commisison, I did not at that time recommend or suggest a compulsory interchange of traffic under specified divisional arrangements, such as I have proposed and recommended in this case. I did not know then that such a thing was practical at all. Recent studies have shown that.

I was asked some questions based on statements in this 1925 report I made to the Oregon commission about the character of country along a stretch of some 65 miles following the route of the pro-

posed cross-State line, in which I used the word "barren" in my former report. I had not seen that 65 miles there referred to at the time that report was made. Since that time and before the hearing in this case I have seen that country and formed a different judgment about (2322) its character. I have seen the greater part of it and formed a very different judgment as to its character. In my present judgment I regard it as a very good range country and a country in which it is quite practicable for stock to be raised and water found sufficient for domestic use and for the use of cattle, the country showing large sagebrush and a good growth of grass.

1249 I didn't explore for water over there, but the country is dotted there with homesteaders' houses that they have abandoned because they had no transportation, and every one of those must have had a well. They could not have lived otherwise. And settlers in there told us that wells would give water over a great part of that country. I have never raised any cattle in it; other witnesses, I am told, have testified here as to that fact.

Q. (By Mr. McCulloch.) Mr. Newell, on pages 132 and following of your Exhibit 16, you have shown for a period of five years traffic of the cross-State line, and for each year it is divided between traffic diverted and traffic created. Has your Exhibit 16, or your testimony, given any explanation of it and on cross-examination, contemplated this diversion of traffic (2323) for a period of more than five years?

A. That is as long a period as I have covered in my showing here.

Q. On page 133 in Table 19, showing westbound traffic from Crane, you have shown cars of various commodities, such as corn, feed, hay, and various kinds of livestock. Is this table meant to indicate that in your judgment this tonnage westbound from Crane is now being produced, or will be produced, in the territory immediately adjacent to Crane and will be loaded at that point into cars?

A. No; not necessarily. It would include such traffic, but it would include also, as regards particularly the first three items, corn, feed, and hay, those commodities wherever they might originate. Corn might be coming from Nebraska; some hay might be coming from Malheur County, some of it might be coming from Idaho. The same with feed. Those are based upon Mr. Teutsch's estimates of the needs of western Oregon counties. He also presented estimates of the production of eastern Oregon counties of the same commodities, but they were not included in my tabulations, because that would be a duplication.

1250 When we adjourned I made just the same statement. Whenever we do get (2324) that Idaho traffic straightened out so that we know that we have it right, without duplication, then I shall present it.

I have recommended a compulsory interchange of traffic at Crescent Lake under specified divisional arrangements. I do not see that there would be anything objectionable if the commission

undertook to make a similar requirement for compulsory interchange of traffic via the Portland gateway from certain territory in western Oregon lying, from the standpoint of distance and of appoximately equal cost and specified joint rate arrangement via the Portland gateway as well. The case does not present such marked contrasts of cost, and the volume of traffic which would be subject to that is much smaller than the other. I say "much smaller"; I want the record to stand that way.

I was asked whether the shippers of lumber from western Oregon, and of pears and other traffic, in my judgment would route their traffic for movement via the cross-State line if it were built. I have not received any information from talking with any of such shippers, or from any other source, to enable me to say or express an intelligent opinion of what they would be likely to do in (2325) that respect. I qualified my answer to the effect that that is something I didn't know much about, and I haven't heard the testimony of the witnesses in this case at all. I have not been able to attend any of the hearings, except as I have had to testify myself. And I recognize that there may be conditions under which the shippers will be quite anxious to exercise that right, but how far it would go I don't know.

I have driven over the route of the Rogerson-Wells line. I have seen it. The wagon road follows quite closely to the railroad quite a great part of the distance. I have not ridden over 1251 it on train. It happened there was no train running the day I was there and I didn't care to wait another day. Anything that I have said in my testimony with respect to the character of the country traversed by the Rogerson-Wells line, or matters of that kind, has been given in the light of a trip I have made through that entire country closely paralleling the railroad; in October of last year. (2326.) That is the Rogerson-Wells line I am referring to.

Q. (By Mr. ELLIS.) Mr. Newell, in answer to some questions of Examiner Rogers with respect to what would be required to justify the construction of this line, I am wondering if you could make yourself a little clearer. Just how much of the western Oregon traffic do you have in mind will be necessary in addition to the Idaho traffic and the traffic to be created along the line as well as in southeastern Oregon—how much did you have in mind would be necessary to justify the construction?

A. That is rather a hard question to answer. It did not seem to me necessary to consider that here, when it was shown to be so ample for that purpose. I have not, in my thinking of the matter, tried to determine exactly how small a traffic would justify that. My table 22 on page 142 shows a four and a half per cent return for the first year, even on the basis of the Alturas line being built at once, and the division of rates, the earnings allotted to the cross-State line made on that lower basis. I really don't know how small

an earning for the first year would justify the building of a line, or the compulsory building of it. I have for the fifth year up (2327) to 8.4 per cent, and both of these figures will be increased—well, quite materially increased—when we get the Idaho figures.

Exam. ROGERS. What proportion of the total revenues that you figure the line would earn come from this western Oregon eastbound tonnage?

1252 A. Well, I could pick that out of these exhibits and answer that question intelligently, if I might do that when I come in with this Idaho exhibit. I don't like to answer it off-hand now.

Exam. ROGERS. That is really the question Mr. Ellis is getting at, isn't it?

A. I take it to be; yes. I can make some study of that. I can take the figures out of here and do it, whereas I would only guess at it now. I had in mind in my answer and suggestion that the line should be made profitable and pay a substantial return the first year, even considering the immediate construction of the Modoc Northern; that it would earn something at least right in the beginning; I mean over and above expenses.

In answering the question: Did I intend to suggest to the commission that in my opinion such a showing should be expected in a case of this kind (2328), or did I merely suggest that was the basis that I had assumed in my study, I think I would answer it this way: It does not seem to me that in order to be justified in the construction of the road that it must earn a standard return, or near that, the first year. I don't think anybody expects that ordinarily of a new road. And finding that on this showing and the plan proposed that it would do it, that is the reason I say that with that traffic it is very amply shown. How much that might be reduced and be satisfactory I would want some time to think over before I even expressed an opinion. (2329.)

(Thereupon, at 12.27 o'clock p. m. a recess was taken until 1.30 o'clock p. m. Wednesday, August 15, 1928.)

After recess

J. P. NEWELL thereupon resumed the witness stand, and testified further as follows: (2330.)

Recross-examination—Contd.

My estimate of business turned over eastbound to the proposed cross-State line at Crescent Lake amounts to nearly two train
1253 loads a day of 56 cars each, or something less than forty thousand cars for the first year. I have estimated it at about thirty-three thousand cars for the first year, that, however, not all being turned over at Crescent Lake, that including traffic from Klamath and southern Oregon. What it would amount to if the Klamath cars were eliminated you will find on page 141. It would amount to about twenty-three thousand cars eastbound for the first year, and

rising to about thirty-four thousand for the fifth year. In other words, increasing the traffic in those five years a little over 40 per cent. I do not know of any railroad in this country that has been built and operated some time that has had any such growth as that. (2331.) To handle that business, of course, a considerable number of empties will have to be hauled west. The total westbound movement of traffic created as reflected by Table XIX, on page 133, is 3,777 cars; I have put no other traffic in here. Not all of this traffic created, is traffic that will be taken from some point beyond Crane, but most of it.

As to Crane and Burns combined originating but two cars a day and the bulk of it will be originated from beyond Crane and Burns, I don't know myself. I go to Mr. Teutsch for the points of origination. I am not prepared to testify. He has stated where the points of origination are, and I have simply collected his information, that is all. They can be traced through these various tables. (2332.) I am taking the statements that Mr. Teutsch has furnished and put them in order in Table XVI, showing the points of origination of this traffic and its destination, then in Table XIX, I deal with it only from the standpoint of its cost, and, therefore, show in Table XIX only the portion of the Cascade line over which that traffic would move, but originates or terminates in the case of a few commodities. Those are all taken from Mr. Teutsch. Those are all the commodities that are supposed to originate in that territory. You will
1254 notice in the lower part of the table, under "westbound," there are certain counties preceded by the word "to," meaning that the corn and feed and hay are moving into those counties, the point of origin of that traffic not being designated. You will note, also, that under Malheur and Harney for wheat, and in the third and subsequent years for hay and barley, certain figures in parentheses; those are Mr. Teutsch's estimates of the traffic originating in those counties, but inasmuch as it is included again in the list of counties to which that traffic is moving it is marked in parentheses here and not included in the summaries of traffic on which earnings are estimated. That does not account for the shrink from his estimate on (2333) page 125 from 4,628 cars westbound to 3,777 in Table XIX; that is, on page 133, in Table XIX, is the first year, and corresponds to the figures on page 124 in Table XVI, whereas for the third year——

Q. Oh, yes; this is the third year I am looking at.

A. Yes; the figures of eastbound and westbound in Table XVI corresponding to the figures for the same years in Table XIX.

If this business is going to move in such great preponderating weight eastbound, there will be increased business, of course, moving through Crescent Lake, and require corresponding accommodations for it. The conditions there for a yard operated by a railroad, with respect to topography of the country and snow conditions are not the best, but they must take care of this traffic in any event if it

goes south. The capacity wouldn't need to be very much increased for the purpose of the interchange.

I presume there would be some advantage in a road being able to reach its terminal where it is necessary for it to furnish volume of equipment like this. Where 20,000 cars a year or more must be hauled in empty there is some advantage of having the business (2334) of the railroad reach its terminal—Portland, for instance, of the O.-W. R. & N. Some provision would have to be made 1255 such as is at Portland. There would be the natural requirements of a division point, of course. It is true you make a lot of empties at a terminal like Portland, where all this business is concentrated and where so much of it originates and receives destination. The traffic delivered here, of course, furnishes empty cars for the traffic going east. Empty cars at Crescent Lake wouldn't be required. They would all be moved on through Crescent Lake to the Willamette Valley or other points where the traffic would be expected to originate. That would be merely a division point.

Before adjournment I stated that I assumed the Union Pacific was the one to build across here, or words to that effect, because I have always understood that this was the territory that the Union Pacific wanted to hold to its rails. As to that understanding being had before the producing territory in the Klamath Basin and at Bend was reached and developed by two competing lines of railroad (2335); as I understand it, they had that view of it before that time and since. I have never understood that made any difference in their regard toward the central Oregon country. Of course, it meant that the other roads had preceded them into a part of that country.

I do not contemplate that any more railroads are needed down to Klamath Falls itself; I don't see any reason for any more carriers going in there. Certainly not with any more tracks.

I have said that I am impressed now that the central Oregon country there for a distance of 65 or 70 miles is not a barren country; not as I described it before. Of course, it is an arid country. I had not been through that central part of it several times before, and I don't know what the frost conditions in that country are throughout the year; but I assume them to be rather bad, because all of that 1256 high altitude has trouble with frost. As to it being the most severe of the entire part of the country; that high desert; I don't know that. It is but very little higher, if at all, than the rest of the country. It isn't so very high. (2336.)

Q. If you have killing frosts with the thermometer as low as 26 degrees, and below for several days each month of the year except for the months of July and August, and then two or three days each month, over a period of nine consecutive years on an average, would you still think that that country would be a good agricultural country?

A. I don't now think it would be a good agricultural country, and have not so stated, except in certain parts of it. I have seen something of the changes brought about in some of that territory by cultivation and improvement. I can remember when I first went into the Grande Ronde Valley, nobody thought they could raise anything in there in the way of a garden, except in a few little isolated points, little coves off in the hills. Since that time I have seen them raising tomatoes in the open air in some of that territory, a most remarkable change as regards the ability of the country to raise crops in spite of frost. The elevation of the Grande Ronde country is about twenty-seven hundred, as I recall, a lower elevation than this. When I first went in—I spent one summer, about 1910, in the Walker Basin in around Lapine——

Q. Let's stay in Grande Ronde just a minute. The Grande Ronde Valley raises and exports cherries and strawberries (2337), and deciduous fruits, and a great variety of products of that kind, does it not?

A. I believe there is a very considerable variety there now. In the cove there, a large volume of the most tender and sensitive fruits that are grown are raised and shipped commercially.

I haven't made any such comparison between that location and Christmas Lake Valley. I was merely pointing out that in
1257 1891 when we built the Elgin branch into that territory there, that the farmers thought they could not raise anything on account of frost over all that valley, except in places like the coves and little isolated protected sections up in the foothills, and the condition is wholly different now. That is a well watered country too. It is a well watered country there, and there is that difference. And in the Walker Basin, at an elevation of 4,200 to 4,300 feet, in 1910 I saw in August, in the mornings ice a quarter of an inch thick on the top of the buckets after the horses were watered. I have seen it freeze after sunrise. And since that time I have seen them raise strawberries, and quite a considerable variety of crops, right in that same territory, when they clear it off and get it cultivated; and of (2338) course they are putting water on it. Lapine is the center of the Walker Basin; it lies just north of the intersection between the cross-State line and the Great Northern.

Q. That is a forest country, in the first place, isn't it?

A. Well, the clearing off of the forest reduces the frost. The people at Wagontire told us in the midst of this and at a higher elevation than the other they had no trouble to raise garden, and I understand, I have been told—I think it has been testified here that Ernst is able to raise crops in Christmas Lake Valley in spite of any frost trouble. I understand he has expanded his little oasis in the desert since the hearing in this case some four or five years ago very greatly. It was larger when I saw it—I don't remember just when I did see it, but I have been told by the witnesses who have been there that it has been very much expanded since that time. He

may have had the same amount of land, 60 acres at the last hearing and 60 acres at this time, but he has certainly extended the watering of it to a very great extent, the cultivation of it. As to that being in
a district where they propose to reclaim (2339) about 46,000
1258 or 48,000 acres: I don't know what the limit is to their pro-
posed reclamation. It is a very large tract. I didn't hear the testimony of the petitioners' witnesses here, and interveners', about the condition there in central Oregon. I haven't heard any of the witnesses in this case.

Q. Well, isn't it a condition wherein grazing is only possible after the rains come in the fall and until the storms are so severe in the winter that they are required to take them off, and then in the spring and early summer until the pools dry up? Do you think that is a country that will be productive of a substantial tonnage for the support of a railroad?

A. I haven't made any estimate myself of tonnage in there. The statements which you quote there are not in accordance with statements made to me by men on the ground and in the country. Of my own knowledge I can't profess to speak; I only know what I saw.

Q. In the hearing of the previous case, I. C. C. Docket 14,392, I will ask you if, in response to the following question, you answered as follows: "Question: Now if the traffic suggested from the Southern Pacific territory that is tributary to existing Southern Pacific lines of railroad is not available for this line," referring to the cross-State (2340) line, "and if this line across the State is to go from Crane to Odell junction and stop there, under those considerations it would be a very serious problem to maintain it or support it at all, wouldn't it? Answer: Most assuredly." Was that your testimony at that time?

A. I believe so. That is the way I desire to be understood now, if it is not to get any of that traffic I should say the same thing. It was my opinion then "That under those conditions it would be a branch line and nothing more nor less than a branch line. I doubt that anyone would contemplate building such a line to Odell without
some practical certainty of reaching some of that Southern
1259 Pacific traffic. The obvious thing to do would be to build
to Bend instead of to Odell, if any such condition were to be contemplated. Then it would become a secondary line of the O.-W. R. & N." That is my opinion now.

Q. Question, reading from page 1312: "And if it was so classified as a branch line, it would not have very heavy traffic, would it? Answer: It certainly would not; that is, it would not have anything like this traffic; it might have a moderate traffic for a branch line, if it were built to tap that timber (2341) between Bend and Odell and some other timber down toward Lakeview. But of course no one contemplates building a road under any such conditions as that at all." Was that your answer?

A. I have no doubt it was. As to whether that is the way I look at the problem at this time: The testimony which has been produced here, and which has been given me to work upon, would indicate that I would not need to be quite so positive in regard to that, but still I do not think it would justify an order to build.

Q. (By Mr. DEY.) You spoke on your redirect examination, Mr. Newell, of the Southern Pacific building this line from Crescent Lake to Crane, or participating in such construction. Now, you are aware are you not, from the Klamath Basin cases, in which application was made for authority to construct the Alturas line, that the Southern Pacific Company, in projecting that line, in asking authority to build it, relied upon the same western Oregon traffic to support it, did they not?

A. I am not very clear about that. I don't recall just what I saw when I read the application, but I know that I was surprised to find how little importance they appeared to attach to the movement of this traffic out of western Oregon and the economy to result in it. It did not seem to me they made their case in their application anything like as strong as they should have done (2342), 1260 but I don't recall just what it said, and I may be somewhat in error in regard to that. It seemed to me they were relying chiefly upon local traffic as the justification for their application. It surprised me very much to find that.

Q. Well, I don't know where you got that impression, I am sure. You would not expect, would you, the Southern Pacific Company to make the very substantial investment that is involved in this cross-State line, when it is now building the Alturas line, which is clearly a competitive line? You would not expect that, would you?

A. Why, on the showing that I have made there, that they could be allowed to earn as much net earning by the haul to Crescent Lake as they would make if they built the Alturas line and hauled the freight over it to Ogden, I can't see where there would be any objection to entering into it. To make money is what they want, of course, and if they can make it in one place better than the other, they would prefer to make it there, even though it might make it necessary to carry it——

Q. That would cause——

A. Pardon me, I haven't completed my answer. I think the Alturas line will be justified as a local line, as it goes through a lot of timber. It doesn't go through any timber until it gets over toward Alturas, but it does go through a very rich agricultural district (2343) all the way to the timber, 30 miles or so, and then a good body of timber. I would not consider that as an unjustifiable investment, although I do not know whether it is precisely sufficient to justify it, but certainly it has a considerable justification in its local territory. And if now the Southern Pacific can be allowed as big a net earning on a hundred-mile haul as it would get out of a thousand-mile haul, it surely is not being badly treated in the deal.

1261 I do not know what purposes the Southern Pacific Company had in mind in building the Alturas line. The purpose of the Interstate Commerce Commission had in granting authority to build it undoubtedly would be to grant a reasonable request, a request presumably reasonable, because the carrier made it in this case, there being no objection on anybody's part and the desire on the part of the company that it be built.

Exam. ROGERS. Mr. Newell, why is it proposed that this line go from Crane instead of Burns?

A. Because Burns lies up a little valley which would make it (2344) difficult of access. The natural connection across the country would be at some point close to Crane. Direct access through Burns would be difficult.

Exam. ROGER. As I understand your Exhibit 16, you only considered there the operating expenses?

A. Yes.

Exam. ROGERS. You did not apply the operating ratio to the operating expenses, did you?

A. No; I have my own calculations of these direct costs, and then when I came to the question of earnings of the cross-State line itself, I included the indirect costs, that is that part of the maintenance which would be independent of the traffic and the return—not the return on the investment, because I calculate that after having taken the other out, but I include the indirect cost of indirect maintenance and operating expenses and taxes.

Exam. ROGERS. Did you allocate anything, rather any part of the expenses that are taken care of by the operating ratio to the cross-State line? For example, take the president's salary, was any part of that allocated to the cross-State line?

A. Yes; but not as a specific item. I make a comparison of the indirect costs of other lines, which would include that, and from that

1262 I estimate the indirect cost, which ought to be attributed to the cross-State line.

Exam. ROGERS. Your cost figures as to the cost of this (2345) construction, as I understand Exhibit 16, are predicated upon a study made and introduced in the previous record?

A. Not entirely. That has been supplemented by a similar study of the Oregon Short Line, which was not introduced in the other case. The cost of construction was not introduced in the other case, the testimony in regard to it, the study of the Oregon Short Line costs.

Exam. ROGERS. The cost of construction?

A. I thought you meant the cost of operation. I used for the cost of construction of the cross-State line the estimate made and introduced in the former case. I understand it has been stipulated into this evidence here, this record. (2346.)

Exam. ROGERS. That is what I was interested in. All we have now is the unsupported figure, so to speak, of so much per mile. At Crescent Lake, if, say, the Union Pacific built the cross-State

line, would that necessitate the Union Pacific building a yard at Crescent Lake in addition to the yard that is there now for the Southern Pacific?

A. No doubt there would have to be some additional yard built there.

Exam. ROGERS. Was that taken into consideration in the cost there?

A. Not as a specific item, but Mr. Abry had made complete estimate, which was introduced, on which he was cross-examined in the other case, and he had included those facilities. I am not able to testify as to exactly what he had.

Mr. SPENCER. The records show, as a matter of fact, the other case contemplated on the part of the petitioners a common-user operation into Eugene, as I understood it.

1263 Exam. ROGERS. That was my impression. That is the reason I asked the question. I didn't understand from the other case (2347) there would be any stopping of the trains at this junction point at all; that they went on through to some point over on the Southern Pacific.

The WITNESS. Well, it would at least be a division point for both roads.

Exam. ROGERS. Necessarily?

A. Well, practically; I would say, yes.

Comr. MCMANAMY. Is it a division point now?

A. It is now a division point. It is at the summit of a very high grade.

I have been to the station of Crescent Lake; undoubtedly there is no layout there that was designed to contemplate any interchange at all; to take care of any interchange at all there; simply a station on the Southern Pacific's Cascade line where they change crews and sometimes change engines, and have necessary sidetracks for that purpose, and that is all there is to it. If this went through as I proposed I think it would be necessary to maintain switch engines and yard crews up there. (2348.)

Exam. ROGERS. How much of a yard do you suppose would be necessary?

A. Well, I haven't attempted any study of that. I added what I thought was a very liberal allowance for the extra mileage, ten miles or so, to what Mr. Abry had figured, using a considerably larger figure per mile than was shown by the average of his estimates, and I think that would be sufficient to care for all the needs that would be involved there, including the yard. I didn't attempt to draw any plans or make any estimates for the yard needed.

Exam. ROGERS. I was just wondering in my own mind whether it would be a difficult yard operation with snow, as it has been intimated occurs, upon the mountains there.

1264 A. It would not be an easy place. It would be rather difficult conditions, it is true, conditions through which it is neces-

sary to move this freight in any case, the only difference of it being the transfer of it to another carrier at that point. (2349.)

Exam. ROGERS. When you introduced your cost study in the grain case, as I understood from the newspaper accounts, one of the criticisms that the carriers offered was that you were attempting to derive a figure from all commodities and all tonnage and apply that to the transportation of wheat; is that right?

A. That criticism was made. I did derive an average figure, and with some modifications applied it to the haul of wheat, n y stand being that there was practically but very little difference in the operations of hauling one commodity from another, making allowance for the difference in loading it, and so forth, considering it after it gets on the road. The differences would lie chiefly in the terminal expenses. There would be, of course, as regards certain commodities like stock and refrigerator stuff, certain other requirements, watering, icing, and so forth.

Exam. ROGERS. I was just wondering, if the preponderating traffic over here is lumber, whether any objection that would be sustainable in the other case as to wheat would be offered here as to lumber, or whether the objections as offered in the other case would not be presented here because here you were dealing with all commodities?

A. I don't myself think of anything that would be pertinent of those objections here. I answered the objections to my own satisfaction in the case there. I don't know whether (2350) it was to the satisfaction of the attorneys on the other side, but there is this difference in regard to it, that the natural desire of the carriers in that case would have been to show that all of my costs were too low, derived by this same method, where as the natural desire here would be to show them too high.

1265 As to where there has appeared here anything that indicates a desire to show that they are too high: I haven't said that you have shown any desire, but if you were to attempt to upset my conclusions as regards the relations of costs and rates the thing for you to do would be to show that they were too high—my figures of direct cost I refer to.

Exam. ROGERS. Did you figure that any additional locomotives or cars or other equipment would be necessary on the part of any of the defendant carriers in order to operate this line?

A. That comes in automatically in here by inclusion of interest on equipment as a feature in direct cost.

Exam. ROGERS. You can take care of it?

A. Yes; that takes care of that automatically. (2351.)

Further redirect examination:

I came back over the route of the Alturas line of the Southern Pacific last fall. I came over the line from Klamath Falls to Alturas over the stage, observing as closely as I could where the road would go; that was last October.

As to further information respecting the elevations overcome on the route of the Southern Pacific from the Willamette Valley through Roseville and east; I don't know that I have it right available. I have used it in my calculations of cost. I had to know those elevations in order to figure the grades and the resistance overcome.

Further recross-examination:

Q. (By Mr. SPENCER.) The testimony developed by the examiner here with respect to your figures used by your study, that you used in the grain rate hearing, 17,000, you made that study the basis for contention by petitioners in this case for (2352) a reduction of 50 per cent in the grain rates in this State, did you not?

1266 A. That is not quite correct. That study was begun, and, in fact, as far as its cost elements were concerned, was finished before the grain rate case was begun at all. It was prepared for this case, and then when the grain case came up I extended it as regards wheat. I haven't cut the rates 50 per cent on lumber, or 50 per cent on any other rates, in arriving at the revenue that is going to make this return to the operation of the cross-State line, not at all. I have taken the figures of earnings as Mr. Wiggins calculated them, I believe a very small portion of it is wheat.

Exam. ROGERS. Well, in figuring the earning on wheat, such as is calculated in here, have you figured them at the 50 per cent reduction, or——

A. The fact of the matter is, on second thought, I believe there is no wheat whatever included here. Let me look. There is a showing of production of wheat in that eastern Oregon country, but I have cut it all out, because I considered it a duplication of the feed estimated to go into western Oregon counties, over this line, so there is no wheat involved here. The only question would be on the obligation with respect to the reduction in the rates of feed, and I can't say what Mr. Wiggins did with them. (2353.)

I did not say in the grain rate case that I thought that all of the carriers are earning too much money, I never said so at all. The indications are to the contrary.

Exam. ROGERS. Then the conclusion would be that the increase on wheat would be offset by an increase on other commodities?

A. That would be the natural conclusion. I didn't go into that, because I wasn't informed as to what other commodities would be affected. I think my figures here have shown earnings on lumber at a loss at the rates existing.

Exam. ROGERS. Then your earnings on lumber, in that case

1267 might be an issue.

A. Well, I see nothing in here to cause any thought that they might be decreased at all, but they do show a practicable loss by the existing lines.

In mentioning taxes, I had in mind the item of taxes which I allocated to the cross-State line. The taxes on the cross-State line are in here, and, as I recall it, it is $120,000.00 (2354.)

GUY CORDON was thereupon produced as a witness on behalf of complainants, and, having first been duly sworn, testified as follows:

Direct examination:

I reside at Roseburg, Douglas County, Oregon; my official position in Douglas County is district attorney at the present time, of Douglas County; I have held that position since 1923. I have resided in Douglas County continuously for the last 28 years. I represent the Chamber of Commerce of Roseburg and the county court of Douglas County in appearing at this hearing. I am here representing both of those organizations. Both of these organizations are interveners in this case. (2355.)

I have some data prepared, for the purpose of this hearing, not in a presentable form, as written, from which I could give the information we have secured.

In presenting to the commission the views of my community and any facts bearing on the desirability of the construction of the cross-State line, I may say, by way of explanation, that Douglas County, while having arbitrary limits, is practically co-incidental in its boundaries with the watershed of the Umpqua River, represents about five thousand square miles of territory reaching from the Cascades to the Pacific Ocean. It has at the present time a population of slightly over four to the square mile, including the urban population.

The section has never had rail transportation other than the main line of the Southern Pacific, which, by the way, extends
1268 for over 116 miles through our country alone, until about 15 years ago, when the branch line from Eugene was built to Marshfield. That crosses the most westerly portion of the county.

The only method of getting the products of that section to (2356) market during all these years has been the one trunk line of the Southern Pacific. We represent, I believe, a section about as far removed from any transcontinental line as there is in the westerly part of the United States. Our products must needs go either 200 miles north to Portland before they can start east or about three times that distance southerly into California before they can start east. As a result, we are, of course, vitally interested in any proposed construction of railway transportation that will cut down for us that lost distance.

Now, the transportation petitioned for would do that, because we could send out commodities north about 75 miles to Eugene and then would be on the main line that would go direct to Crescent Lake or other connecting point, and through direct east.

Of course, we are more interested in seeing a cross-State railroad built through to the seaboard, but first considering the connection with the so-called Natron cut-off.

We have within our county several major products of a perishable nature, the chief one at the present time being our broccoli crop, or winter cauliflower. Due to an exceedingly mild winter climate, we

represent one of the very few sections competing with the semi-tropical portions of the United States in the production of winter cauliflower. (2357.) At the present time, due to the poor rail connections, that product is put on the eastern market, where, of course, it is all disposed of, about four days later than the same product from California. That is due to the fact that we must needs
1269 go around by Portland and through a congested terminal, and perhaps through another one at Spokane if it be routed that way, or else go down the Southern Pacific by Roseville and Ogden. My understanding is that the actual movement of the greater portion of the broccoli at the present time is routed north, through Portland. Now that product is peculiarly of a perishable nature, and it represents a big productive area of Douglas County. It is a new product in our section, comparatively new, at least; it was first grown there in 1913, and yet within that short time it has reached a maximum production in the county alone of 900 cars, in round numbers, a year. The crop as an annual crop is a valuable crop to us, due to the fact that it doesn't need several years to come in production.

The potential acreage in our county that could be used for our broccoli crop is in excess of ten times that actually used. Now, I have reference only to that acreage that could be profitably used for the crop. (2358.)

Any transportation system that would shorten our distance and time to the markets for that crop alone, would, of course, be a wonderful thing to our section of Oregon.

As to the production of broccoli being limited in any way during the past years: the limitation feature is a limitation, I would say, that is based upon the trouble with transportation. It must be sold in competition with a similar product from another section which can be put on the market earlier than ours can, and it could be vastly increased if we were put on an even footing with the other sections producing the same crop.

Exam. ROGERS. You said there was 900 cars of broccoli now a year?

A. That is the greatest yearly crop we have had. I think that was in 1926 it went to 900. 1927 is was less than that, due to a flood that took out a good share of the crop on the lowlands.
1270 I haven't the figures for last year.

Exam. ROGERS. That moved all by the Southern Pacific, did it?

A. It had to move that way.

Exam. ROGERS. Do you know where it moved to?

A. Well, to eastern markets, Chicago and New York. When I say it had to move Southern Pacific, I mean it originated on the Southern Pacific and there was no transportation from that section other (2359) than the Southern Pacific, except by truck. At the present time, that is.

The effect on the present production of broccoli the continuance of existing transportation conditions will have: It would necessarily follow that the crop would not be extended, and in all probability would be restricted. There is no reason to expect a heavier acreage than is now planted under the present conditions of transportation that we have to face.

Just what the growers of my community have done to overcome their distance handicaps by improved methods of packing and shipping, I don't know. So far as packing goes, broccoli is a vegetable crated, and the shipping, of course, must necessarily be taken care of as other perishable fruit is, shipped under ice, it must be.

We produce other commodities of a perishable nature that are affected in a similar way by distance of transportation, particularly our fresh fruits. I think Mr. Norton, from our section, has been before you here and has discussed that matter somewhat in detail. In the last few years there (2360) has grown up a demand for what we call green prunes, which is a distinction between the fresh prunes and the dried prunes. Now, we have within Douglas County between fifteen and twenty per cent of the production of prunes in the Northwest—not in acreage, but in crop production. The greater portion of that, of course, is handled as the fresh or green fruit, and, of course, that is in the same situation exactly as the 1271 broccoli—it must reach its market fresh. The green fruit market is in the Middle West and the East, just like the broccoli market is.

As to what extent the transition to the shipment of green or fresh fruits been brought about by economic conditions or the condition of the market for dried fruit: Well, the market for dried fruit is practically restricted, it is limited, and the handling of the fresh fruit is an additional method of taking care of that particular type of a crop.

Q. Well, if you are not able to ship your fresh fruit through (2361) to market rapidly, so as to compete with other producing sections, will your country be able to continue to develop in the production of fruit through the use of drying methods, shipping them as dried products?

A. Well, of course, they can dry some portion of that, but the market that exists for that type of commodity, the fresh fruit, and a market that we could help in supplying, is close to us, and necessarily to that extent we are restricted and injured, can't help it.

My section of the country does not produce melons on a large scale. We produce melons, and they are sent, but I imagine that practically all of our melon market is in the West. I don't think there is much goes East, although there is a considerable market for our local products east of the Cascade Mountains, and it is now carried into that section by truck, and there is no real eastern market. We have, of course, the further products of mutton and turkeys—I

think perhaps within our county one of the greatest turkey shipping centers in the United States—and those things come practically under similar conditions.

I do not know on what basis our icing charges on fresh fruits and vegetables are assessed.

The other products in my county in which I (2362) am mainly interested from the standpoint of transportation to market
1272 are: Well, within the county there is a stand of commercial timber of substantially 55,000,000,000 feet, I mean timber that is now ready for cutting, classified as commercial timber. Now, that is practically untouched. I believe you heard here Mr. Fox who is one of the heaviest owners of timber within the county, and his situation is that of other private timber owners in our county.

We have a potential water power in the Umpqua River to operate all of the manufacturing concerns that would ever be needed for the reduction of that timber to all forms of manufactured article, and it is running down the river and going to waste, and will, for the simple reason that our two methods of outlet are closed, practically. We are within 80 miles of Coos Bay, which is now being improved by Federal aid, and the mouth of our own river, the port of Umpqua, which is a federally improved port. We can reach either of them without going north to Eugene and back south, making about fifty or sixty miles additional haul for nothing.

Our market for timber, or for lumber products, is twofold, it is the world market at Coos Bay and the seaboard, in the first place, and the interior market, that is, the main Mississippi Valley, in the second. (2363.)

Now, a manufactured article in the way of lumber products in Douglas County is under a handicap, for instance, with that produced in Jackson County. If it goes south toward the eastern section it must be hauled 110 miles farther and carries an additional rate. If it goes north it must needs go around the additional distance, and there is no transportation now except the one road, and it doesn't give us the facilities for carrying the lumber out.

There have been two major lumbering operations contemplated in our county in the last fifteen years, one of them by Kendall
1273 Lumber Company, and another one by Roach Timber Company. In both instances they were abandoned by the transportation question here extending. I think Mr. Fox told you about his connection with the Roach Timber Company.

Now, that timber must come out, and a railroad, if constructed on through to the seacoast, could tap the greater portion of that lumber—it would give an immediate method of access and an immediate market for the lumber, and much of the lumber is now ripe and going backward. It is probably the greatest undeveloped resource of the county at the present time, and is throttled.

For about ten years I was connected with the county (2364) assessor's office in Douglas County, three years county assessor. During that time a cruise of the timber was made, and there was a re-

appraisement of the lands of the county, farm lands. As a result of being connected with that work I have rather an intimate knowledge of the general situation in Douglas County, and there is a potential development there that is really remarkable. The county should have five times the population that it has now on lands that are of the highest degree of fertility, some of them now used for grazing where ten acres will support a family. That situation ought not to exist—would not exist if the products resulting from intensive farming could be disposed of by reaching a market. It can not. The result is that those crops that can be disposed of by the roundabout, circuitous route are raised, and sheep are fattened there, and cattle and the like, where intensive farming could be carried out. That is one of the situations there, and that is true down the main valley floor for seven miles. The people down there have really gotten to where they figure that the one outlet that they have carries rates that make it inequitable so far as they go, and they
1274 simply don't go forward,—they are standing marking time,—and any construction of transportation facilities within the State that will to any extent put them on a parity with other sections of the United States engaged in raising the same (2365) crops and the same distance to market will be a Godsend to that part of the country.

In completing my statement as to the resources available for development, I can give you some estimates. It might be well for you to understand the situation in the county from a climatic standpoint, because that is a dependent factor in considering the potential products of the county.

Now, that section of Oregon has the lowest average wind velocity in the United States, has an average annual precipitation of approximately thirty-three inches, and an average growing season of 227 days, that is, from one killing frost to the next. It is an extremely long growing season. It has very moderate temperature, the lowest recorded temperature being fourteen degrees above zero. It leaves a wide latitude for the growing of the tender types of vegetable products which are the perishable types. It is also an ideal country for poultry, and that industry is rapidly being established. There is room there for a very considerable development along that line, and the development will come without question, and will come, of course more quickly, more definitely, with increased transportation facilities. I have covered the timber. (2366.)

There is another matter that should be considered. In southern Douglas County and northern Josephine there is a considerable mining industry that is being developed more now that more improved method of ore reduction has been made. Those industries to a great extent are based on low grade ores, where transportation is a big factor. The development of that line of industry would be another one that would be affected by transportation.

1275 I don't recall any other matters that ought to be presented here. I have generalized on them, because I feel that any estimate as to potential crop in the future is more or less of a guess.

Q. Have you prepared some estimates of a general nature that you could give here as to the potential tonnages that might be available for movement over the Cascade line?

A. The chamber of commerce prepared some such figures, but based it on an area larger than just the county. They figured in Douglas and Coos Counties, figuring those two counties as being tributary to a cross-State line, and the figures compiled by the chamber as a safe estimate of potential tonnage available for a new railway line from eastern Oregon connecting with eastern points and traversing Douglas and Coos Counties to a western terminal on the seaboard would be as follows: (2367.)

Comr. McMANAMY. Have you any knowledge of those figures that you could be cross-examined on?

A. They are estimates, Mr. Commissioner, entirely, and I have a knowledge of the facts upon which they were based.

Exam. ROGERS. Do you have knowledge of the basis for the figures?

A. Yes.

Exam. ROGERS. Do you know how they were drawn?

A. Absolutely. (2368.)

Exam. ROGERS. Can you separate the figures in any way to make them relate to this cross-State line, rather than a line running over to the coast?

A. I don't believe that the figures that I have here could be so separated. They were grouped with two counties.

Exam. ROGERS. Well, what value do you see that they would be in this case in relation to the cross-State line?

1276 A. Well, they have value chiefly in any consideration that might be had to a terminal beyond the line of the one applied for, frankly.

As to what extent the tonnage included in this estimate might be expected to move to Eugene and thence via Crescent over the Cascade line: The tonnage from Coos County would be affected to some extent, I am not prepared to say to what extent, but that they would be an increase, for instance, in lumbering in Douglas County by reason of a shorter haul would seem reasonable.

Those figures were prepared with the thought that the construction from the coast through to Crescent would be expedited by the cross-State line, and they were prepared with the thought that this was potential tonnage that would in the future be available to the cross-State line (2369); that was the purpose, a cross-State line ultimately connecting with the seaboard.

The estimate is that there is a potential production of fresh fruit and broccoli of five thousand carloads annually. In explanation, I may say that the production has reached on broccoli alone 900 carloads, and, as I have stated before, that would not represent over, if,

ten per cent of the land adaptable for that one crop in Douglas County alone, and that crop is a better paying annual crop than any other raised in the county.

The estimate on dried prunes is 1,500 carloads. That estimate, of course, is based upon the present production of that fruit, with the possible increase that would come from orchards planted on adaptable tillable land within the county.

The lumber possibilities have been estimated at 25,000 carloads a year. Well, that is based upon the fact that there is between eighty and a hundred billion feet of merchantable timber within the two counties at the present time, that is, timber
1277 available for cutting. Some portion of that would go by the seaboard. Better than 75 per cent is tributary (2370) to the inland and would have to move over some rail transportation. I would say 75 per cent would go inland. Now, pardon me, I don't mean that it would go inland, but it is inland and would have to move over a transportation system, whether to the interior or to the coast. A portion of it might move in logs to the coast and be milled there at Tidewater. There is better than fifty billion feet of that that would have to move from sixty to one hundred fifty miles to be available in logs at the coast. That would naturally go by inland transportation. The other figures here I don't believe are such as would be of any interest or use to the commission. That concludes my statement.

Cross-examination:

Q. (By Mr. DEY.) Now, on that timber, Mr. Cordon, you say that it being located from sixty to one hundred fifty miles from the coast would necessitate its being transported inland and manufactured? (2371.)

A. When manufactured it wouldn't necessitate it at all. It could be moved either way. As to why it wouldn't go to the coast in the logs from this area lying between 60 and 150 miles from Tidewater: The transportation of logs for that distance, in my judgment, would in ordinary cases be prohibitory as against transportation of the manufactured product.

Q. Well, don't you know that we are hauling logs all over the State of Oregon for distances as long as that—in the Klamath Basin territory, and out here in the coast territory?

A. I imagine where the necessity of it is there. That wouldn't be here. Assuming that it is necessary to locate the mills at Tidewater, it would be necessary to move the logs there.

I am the district attorney of Douglas County; I am not engaged in any type of farming. (2372.)

1278 It would seem to me that the difference in time between the movement of our broccoli east from Roseburg and Douglas County and the movement from the broccoli producing sections of California would be four days. Now, I haven't checked a schedule of it. Those are the figures given me by those interested in broccoli shipments.

Q. All right, let's check it a little. Now, then, the broccoli district of California is principally at Colma, near San Francisco Bay, and some down, perhaps near the coast at Los Angeles, and that broccoli, particularly the Colma district, the principal one, being right on the Pacific Ocean, is moved to Granger, Wyoming, over the Central Pacific—or to Ogden, rather, over the Central Pacific Railroad, and your broccoli is brought to Portland and moved by the Union Pacific—O.-W. R. & N., Short Line and Union Pacific—to Granger, where the California broccoli meets it.

Now, do you know the running time between Roseburg, or Douglas County, and Portland on that broccoli, those distances are substantially the same? (2373.)

A. Well, I know the distance. I know that it is substantially 200 miles that it must move to get into Portland on the Southern Pacific line before it can be routed over whatever other line it goes, including its being held whatever time necessary in the terminal and being rerouted.

If you stated as a fact that it gets to Portland in 18 hours and is out of here inside of 24 hours all-told, I would assume it to be a fact; I don't know. When I state four days, those figures were given me by people in my section who handle broccoli, that they were four days late in their shipments over similar shipments from California. Those people (2374) were the growers of any size, or the principal growers in that section, I think the title of the organization is the Umpqua Broccoli Exchange, I think is the name of the 1279 organization, the manager, Mr. Butner.

I do not know what the broccoli shipments were in 1925, I have only the cars of 1926, which in round numbers was 900 cars. I haven't between '13 and '26, only that maxmum of '26. It was slightly less in '25, and on backwards to '13 when it originated in that section.

Q. Now, isn't it a fact—you were down there and living there—that in 1925 the frosts practically killed the crop?

A. They have had years—now, whether it was '25 or '24—when there has been a loss by frost, but, Mr. Dey, as a matter of fact in the one year that I have memory of when that was at all severe the very fact that a partial loss by frost held the balance of the crop down, the result in money was of no great difference. You understand, broccoli is perishable because it is late, not because it is early. As to any serious effects on our crops from floods, one time, when we had the one flood of its size known in (2375) that county for 35 years—that was in 1927.

Q. Now, in 1928 you had a small crop, and also low prices, did you not, on account of the competition fr m ——

A. In 1928, Mr. Dey, the crop is about that high (indicating). That is this year.

Q. Well, this last season?

A. Oh, we measure it from the year before, when we plant it. Last year's broccoli crop was an ordinary crop, I would say. It wasn't

a heavy crop. There wasn't as great an acreage as there had been before. I have an estimate here of 350 cars.

The greater portion of broccoli that is shipped from our district in Douglas County goes through Portland. They route it through Portland because it is shorter, is my understanding of it. (2376.)

Redirect examination:

1280 I do not know how long they have been routing their traffic through Portland. As to the information that would enable me to express an opinion as to whether or not with the construction of the cross-State line the products of my county would be routed via that line as against the present routing: From the general knowledge that I have gained there in my work with those people, the fact as Mr. Dey has stated that in any event there was a 24-hour loss by the northern route, it would be reasonable to believe, and I think I can safely say it to be a fact, that if the route were established through the central part of Oregon and a saving in time should be made that practically the whole of the perishable fruit and vegetable shipments would be routed that way.

Exam. ROGERS. Well, you would have another terminal movement over what you have now, if there was interchange at Eugene and then again at Crescent Lake.

A. There shouldn't be any terminal stop of any consequence in Eugene. The Southern Pacific connections would run you through at least to Crescent.

Exam. ROGERS. Well, they would have to break up the train at Eugene, wouldn't they, to get this broccoli out in any quantity? (2377.)

A. If they were shipping the amount in any quantity that would go from there it would go practically in train loads. The crops will naturally have an increase when there is a better market afforded by shorter transportation. From the standpoint of future development of our community, the construction of this cross-State line would be a vital thing in the development of our section.

Recross-examination:

Q. (By Mr. DEY.) By the way, have your people down there, heard of or taken any interest in the construction of the Alturas line?

A. Not that I know, Mr. Dey.

Q. (By Mr. SPENCER.) You say vital to the development
1281 of your section, when you refer to the cross-State line do you refer to the line to go through your country there and on to the coast?

A. I was so referring in connection with my estimated figures, Mr. Spencer, but in answer to this last question I had reference to a cross-State line that connected onto the present Southern Pacific Company. Of course, that won't be the benefit to us that a line connecting with the seaport would be (2378), but it would neverthe-

less be a benefit, because it would shorten our distance to our market. I don't see how it could help but shorten our time to Chicago. If it didn't, I don't know of any benefit we could get other than perhaps better service. Whether we would get that I don't know.

Q. You wouldn't get as good service if the other line took it and delivered it at faster time, no difference in the rate—you wouldn't be any better off?

A. The main thing we are interested in is time. The complaint we have of the service now, is simply that it takes too long. Of course, we have complained many and various times for lack of cars, and that sort of thing. That has been off and on for a good many years.

Q. But you don't think this cross-State line is going to induce the production of 5,000 cars of fruits and broccoli, do you, in Douglas County?

A. If there is an appreciable shortening of the time, so as to permit all of our products getting into markets, there will be without question a stimulation of the industry. The (2379) increases given there was predicated upon a building into the section which would put competing lines in the section, but even without that if there be a shortenng of time between the place where our products originate and where they are sold it will stimulate the production without any question. We have the land, and it isn't all put to use by any means, and is would be a profitable industry, and that will
1282 cause it to be developed.

Exam. ROGERS. How much shortening of time do you say would have to be before it would produce that result?

A. Well, anything that makes an appreciable length of time, from eight hours on up, would be a lessening of time in the handling of perishable goods. We figure in that section that the saving in miles alone ought to make a difference of at least two day, and from that to four, depending on which way the stuff has been routed.

Exam. ROGERS. Where does this broccoli move to?

A. Chiefly to Chicago and New York City.

Exam. ROGERS. It is marketed there pretty much on the daily markets—that is, the morning markets?

A. Yes; as a fresh vegetable.

Exam. ROGERS. If it doesn't get there in time for the morning market, and gets there later in the day, ten or twelve hours, might it just as well wait until the next morning?

A. Absolutely. (2380.)

Exam. ROGERS. So if you didn't speed it up twelve or fifteen hours so as to make it a day earlier on the market it wouldn't help much?

A. Depending, of course, on what time it now arrives—it might take twelve or fourteen hours to make a difference, and eight or ten might make the same difference.

I don't know whether it runs by a schedule to take it into Chicago on the Union Pacific-Northwestern route now. An observation of

that kind has not been discussed with me by these people with whom I have discussed the matter.

Q. Well, if it goes into a fruit block now after leaving Portland and goes by a schedule to make Chicago at a certain hour and for a certain market, you would have to meet that or better it by a whole day, or twenty-four hours, would you not, across the cross-State line?

1283 A. It all depends upon when your block got on the market there. I don't know when it would get there. A real practical proposition of getting it there as soon as possible. (2381.)

W. F. RAMSDELL was thereupon produced as a witness on behalf of complainants, and, having been duly sworn, testified as follows:

My full name is W. F. Ramsdell; I live in Portland and I work for the United States Forest Service in the capacity of assistant chief of the branch of forest management for the district of Oregon and Washington. Coming under the branch of forest management as duties performed; activities engaged in by that particular branch in the State of Oregon, for example, it handles or supervises the work of the officers of the various national forests in the matter of the sale of national forest timber, in the matter of preparing what we call management plans, or planning for the sale and the handling of national forest timber, and the policy under which that timber will be sold. Another principal duty is in connection with matters of reforestation. Those are the three principal ones.

The national forest management, has adopted and is following a plan of selling stumpage in the national forests for manufacture into (2382) lumber on a basis that will insure indefinitely into the future a sustained yield of timber. That is the basic policy of the United States Forest Service in handling its timber, the timber within its control, both in Oregon and elsewhere. The only exception to that is such bodies of timber, usually small in character, as are intermingled with, oh, greatly larger, predominating bodies of private timber; in other words where we do not control the situation. There of necessity we simply have to sell along with the private stumpage in any way that that is handled. In volume that probably does not exceed, I would say, ten per cent of our total. In other words, at least 90 per cent of our timber is handled on the sustained yield plan.

1284 The sustained yield plan and the basis for it: Well, the basic principle is to cut, in the long run, over a long period of years, no more than the growth of the timber from the land. In arriving at what might be called a cutting budget, a plan of cutting, we have to take into consideration the character of the timber which is already there, so that in some cases we may have a very heavy stand of over mature timber, for instance, and which it would be good business to (2383) somewhat overcut. In other cases, our timber may be young and thrifty, where it is better business to hold back, to a certain extent. When I mentioned a little bit ago the character

of the timber, I had in mind whether the timber was overripe or young and not yet fully mature.

The basic policy or plan of the Federal Forest Service does not depend upon the variety of timber, but the method in which it can be followed out does depend upon that.

An illustration of the working out of this policy in actual practice here in the section producing fir timber west of the Cascade Mountains and a particular operation where the Government has sold fir stumpage and give the details to illustrate my testimony is the sale of timber to the Anderson & Middleton Lumber Company of Cottage Grove. Now I have with me the plan, if I could refer to that. I could give the general figures, but I could give them a little more accurately by referring to the copies of our file for the plan of handling (2384) the timber that is sold to that company and for the stumpage which is tributary thereto.

In referring to my figures and in saying how much timber there is in the block or unit that has been sold to Anderson & Middleton Lumber Company, I believe it might be a little more clear if I would first give the figures for the territory which we handle
1285 as a unit, working circle unit, we call it, which is the territory within which a portion of the timber only has been sold to the Anderson-Middleton Company, but within which no more timber will be sold until this first unit is cut.

Now, this particular territory is in the watershed of what is known as Row River, with its tributary creeks. It lies in the north end of the Umpqua National Forest, all in Lane County, Oregon, east of Cottage Grove. Within this territory there is at present an estimated amount of 2,020,000,000 board feet of mature timber. Cutting that timber at the rate which has been determined upon of 40,000,000 feet per year, it takes fifty years to cut out that mature timber.

There is also in that territory a large acreage of immature timber, stuff which can not be considered merchantable now but which by the end of this fifty-year period will have (2385) a total stand, using our standard yield tables, which I believe have been discussed in connection with this hearing previously by Mr. Munger, of the experiment station, this one immature acreage would at that time, within fifty years, or at the end of the 50-year period, contain 1,140,000,000 feet. That would be mature timber, ready for cutting; the stuff which is now—oh, in the pole stage, immature timber, but with fifty years additional growth would come into the merchantable-size class. Then a small acreage of still younger timber—before that I should state that that 1,140,000,000 feet provides an additional 28-years' cut; that is, dropping the fractions. That fifty plus 28 makes at the end of the 78 years the third classification of young growth will have 755,000,000 feet of merchantable-size timber, and those three classifications make up the total acreage, stuff which is now immature, stuff which is in the pole size, and the stuff which is still younger, and that last body provides 19

years cut, giving us a total years of cutting run on that territory of 97 years, at the end of which time it would be necessary to
1286 start back where the first cutting began, and within which period, in this Douglas fir territory, merchantable timber can be grown.

Now that is the territory within which the sale to the (2386) Anderson-Middleton Company has been made.

From a seedling to a mature tree, ready for cutting, Douglas fir will take approximately one hundred years to grow. Those private interests who have looked into the matter most figure on a shorter life cycle, anywhere from 60 to 75 years, but the Government always figures on growing larger size stuff, and we figure anywhere on from 100 to 120 years.

Out of this whole circle of 2,020,000,000 feet of mature timber now in this area, 375,000,000 feet has been sold to Anderson & Middleton. By their contract with the Federal Forest Service they can not exceed the average annual cut of 40,000,000 feet a year. That average annual cut of 40,000,000 feet does not exceed the estimated annual growth of the timber in this entire block of 2,020,000,000 feet, not with the additional growth as previously explained, of the present pole size timber. By cutting at the rate of 40,000,000 feet, we have 97 years cut assured, and that has all been placed on what we believe to be a very conservative basis. In other words, out estimates of the growth on the (2387) young stuff we have discounted.

I have said that no other timber would be sold to anybody else in the block now containing 2,020,000,000 feet while the Anderson & Middleton Company was operating in the present 375,000,000 that it purchased. The only exception to that would be in case of some unforeseen calamity, such as a forest fire, which might kill a body of timber and it might be necessary to salvage it.

In determining the amount of acreage and the amount of stumpage to be included in any one of these circles I have mentioned, the considerations kept in mind: We select a territory which topographically lends itself to logging to some convenient
1287 milling point in a territory large enough to give a cut which makes it economically possible for the purchaser to operate, so he could not be restricted to so small a cut that he could not get in with railroads and make the necessary investments.

As to what the annual cut in thousand feet board measure will range between maximum and minimum limits under the contracts that the Federal Forest Service make: We have some where the working circles are as small as 10,000,000 feet. Now, particularly, in the yellow pine, we (2388) have situations where we don't necessarily sell to a single purchaser. We may cut up the cut to small mills; 40,000,000 is considered a fairly large size operation; although they vary from thirty to—I believe that fifty million is as large as we have made at the present time in the Douglas fir region.

Q. Now I wish you would give one illustration in the pine region of eastern Oregon, if you can. Are you familiar with the location

and management of the national forest yellow pine timber tributary to the line of railroad extending north from Burns to Seneca?

A. Yes, sir; I had a part in developing the plans for handling that timber.

There is 429,239 acres of loggable timberland in national forest timberland in that area. Our estimate of the volume of merchantable timber on that acreage is 5,466,000,000. (2389.) Our maximum annual cut from that area that would be permitted under this sustained yield policy of the Federal Forest Service is 73,000,000 feet. That is determined somewhat differently than with Douglas fir. In explaining how it is determined and the difference: The best practice in handling Douglas fir, both from the viewpoint of the logger and the forester, is too clear-cut, with the reservation merely of sufficient trees to assure a seed for the natural reseeding, while with yellow pine our system, and the system that is followed every-
1288 where, both by private and public agencies handling yellow pine timber under forestry practice, is to cut under what we call a selection system, selecting only the large mature and overmature trees and reserving all of the thrifty or younger trees, even though they may be of merchantable size. That results in that particular territory there in Grant and Harney Counties in cutting about 80 per cent of the present merchantable volume, reserving about 20 per cent of the present merchantable volume; and there is also reserved, of course, all of the younger growth in small saplings and poles not included in the merchantable stuff. (2390.)

The Forest Service has sold timber from this particular whole circle to the Edward Hines Western Pine Company. The volume which is under contract, which must be cut, is estimated at 770,000,000 feet, western yellow pine. The rate under their maximum annual cut will average 60,000,000, and I believe it figures out it will take it about thirteen years to cut the total of 770,000,000 feet.

At the end of that period of time, an additional block of timber will be advertised, sold to the highest bidder, and in that territory it will be a fairly large block of timber, several hundred million. It might be somewhat smaller than this first block.

A yellow pine tree will grow from saping to the size (2391) we wish to grow timber, which is a little larger than would have to be grown to be merchantable, in, we figure, 180 years in that yellow pine territory.

I do not have in mind with sufficient accuracy to quote it, the approximate amount of standing timber in all of the Federal forest reserves within the State of Oregon.

This policy that I have outlined of selling the timber and having it cut on a sustained yield basis is the policy that the Forest Service has adopted with respect to at least 90 per cent of all of the
1289 national forest timber in the State of Oregon. That is a conservative estimate, 90 per cent. The essence and gist of that policy is the selling of no more timber out of the national forests than natural growth will offset each year. That is true, taken over

a long period of years. We will, we believe, in Douglas fir, be able to increase our cut at the second cutting, while in general in the yellow pine our cut will be decreased somewhat the second cutting.

If that policy is followed and carried out, it will result in insuring an indefinite supply for the future of timber for sale and cutting out of the national forests in Oregon. (2392.) That is the primary purpose of the policy and would result in that.

Cross-examination:

I have been out here on the coast in this work continuously since 1914, except during the war in the service; that is fourteen years ago. I have jurisdiction over the Washintgon forests as well; out of this district office here in Portland.

In round figures the area of the national forests in Oregon is 13,000,000 acres national forest land; that includes waste land as well as timber land; and in the State of Washington approximately 9,000,000. That is 5,000,000 acres less national forests in Federal ownership in Washington than in Oregon. The area of the State of Oregon that is in Federal ownership, I believe, including all forms of Federal ownership, which includes a very large acreage of desert land area (2393) and public domain in the southeastern portion of the State is approximately half of the area of the State. It is not far from fifty per cent and that percentage is not nearly so large in Washington.

On the Anderson-Middleton sale in Lane County, the net result is this: A block of 2,020,000,000 feet is put out. One sub-block of that major block is sold and at 375,000,000 it would amount to about 15 per cent of the whole. That will keep them cutting for between nine and ten years. In the meantime 85 per cent of
1290 that block is set aside or tied up.

Q. That is, for between nine and ten years; then for nineteen years 70 per cent of it is set aside and tied up?

A. No. That is assuming that a similar size block will be sold the next time.

Q. Yes; well, isn't that your plan? (2394.)

A. Well, the size of those fluctuate somewhat, depending upon the particular topographic situation. We try to sell them in natural logging units within the block. The next sale might be somewhat less or somewhat more. But it will take 97 years before we get rid of all of it. So that the flow of timber onto the market and for transportation by the railroads from the national forests is going to be a steady one. In other words, it will not be thrown on all of a sudden so that it will require a great deal of additional transportation facilities to handle it. Our purpose is to keep the cut steady, sustained from year to year.

Exam. ROGERS. Do you know what the annual cut has been as a total over any given period in the past? Well, the State as a whole or for cuts in such way as you have it? What I am trying to get at is

as to whether there is prospect that any more timber in the total will be cut in the future than there has been in the past few years? (2395.)

A. Yes, there will; through the sale of additional blocks. That will go forward. I am dealing just with the national forests. The private lands, a lot of them, were cut out and they are being cut out while we are placing these others on the market; particularly in the Columbia River Basin in Oregon.

I believe that the statistics show that the total consumption of softwood in the United States has been pretty much on a level—about the same; which means that the per capita consumption has been dropping somewhat. The total consumption has been remaining about the same over the last several years.

1291 Q. Now, of course, the same principle obtains over the Grant and Harney Counties, where you have the five and a half billion block of pine? There you sold 770,000,000 which will give them cutting material for thirteen years; then another block will be put on; the major portion will be tied up for another twenty or thirty years, won't it?

A. It will be tied up for the period of this first sale of (2396) thirteen years. That is within this area. There are also some additional blocks which have not been considered.

There is one large body of privately owned timber within the Malheur National Forest. That is that owned by the East Oregon Land Company. They have somewhere in the neighborhood of 600,000,000 feet of western yellow pine. Elsewhere within the forest it is small.

Q. Well, that block is not tributary to this railroad that has been constructed from Burns up to Seneca but is separated from it by a divide which will necessitate its moving, when it does move, down the north fork of the Malheur to Juntura; isn't that right?

A. I believe logging engineers have differed somewhat in their opinions. Some contend that the Juntura outlet will be the logical outlet and others have contended that it can be moved out over the Seneca-Burns Railroad as readily, or more so, than the other. I would not say which is correct. (2397.)

This five billion feet north of Burns that is tributary to the so-called Burns-Seneca line, is east from Emigrant Creek, and extends to that John Day River divide. That block so tributary comprises the five billion and whatever amount it was; and within that territory there is comparatively little private timber; probably not more than three or four hundred million feet; there might be as much as 400,000,000.

West of the Malheur National Forest is the Ochoco Forest. As to its being a continuous forest, or somewhat divided: It has

1292 that deep canyon of the south fork of the John Day River that cuts back into it; so that part of it would naturally go down Silver Creek to the Burns country; and the other part would go toward Prineville for the logging and manufacturing. (2398.)

The Lake County forest, national forest, is in my control, too. That is called the Fremont National Forest, lying in Lake County.

Q. How large a tract is there in the Fremont Forest, in the north end of the county, or, rather, in the north end of the forest right south of Silver Lake; do you remember, about?

A. Well, comparatively the great big bulk of the timber is in the south end of that forest. It is not in the north end. That is for two reasons: We run into more of the unmerchantable jackpine or lodgepole pine; and the—where that timber is better there is more of it in private ownership farther north.

Q. I wish you would look at this key map, so-called Exhibit 3. Does the Fremont Forest, I believe you call it, or the Fremont National Forest, appear on that map?

A. Yes, sir; this is the territory [indicating on map]. The territory in the vicinity of Paisley and Lakeview, and it extends north to the Silver Lake. When the timber is moved or disposed of, this in the north end, if it were disposed of at the present (2399) time, would be most apt to go to the Klamath milling center, although you get into a territory a little farther north of that we feel would probably be somewhat disputed as between Bend and Klamath Falls. That is, north and west from Silver Lake. There are only some very small scattered tracts there in the Fremont Forest. There is some, these patches out in here [indicating].

Q. Now, how much of a stand is there in the north end of the Fremont Forest between Silver Lake, say, and the words "Summer Lake" on this map? There is a district in there of about
1293 how much, do you remember?

A. As I recall the figures, the total stand on the Fremont National Forest is about 7,000,000,000 feet, and there is probably not over one billion of that in that north-end territory.

Q. That is, alongside of the Summer Lake and to the west of it and running up to Silver Lake?

A. That is of the national forest timber. Our heaviest stands in that territory are farther south.

As to whether I consider any of that would be milled on Silver Lake (2400): There is a considerable territory around Silver Lake, which, if there were transportation out from Silver Lake, could very readily be milled there, but it is not big stands in the same comparison with those stands further south. The quality of the timber is as good as that being manufactured at Bend, but it is not as good as that being manufactured at Klamath Falls. It is probably not quite as good as that that has been contracted for by Hines.

Q. Now, you were speaking about the vacant area in Oregon as compared with Washington, as I understood you. Was that what you had in mind?

A. Well, I didn't make any direct comparison, but I said that of the total a large proportion of the Federal ownership in Oregon was made up of vacant public lands. It is open to entry in this

so-called high desert country in the southeastern part of the State. As I understand, comparatively little of that is being entered upon now. A good deal of it was taken up a number of years ago under the grazing homestead act. They took up around the water bowls and key positions, patches of ground, areas of ground (2401) which would control the surrounding country. They were taken up for grazing purposes almost entirely. There is a good share of the country that I would say would not afford opportunity for
1294 settlement. I think that is the reason there is such a large acreage that is public domain, when it can be taken up under the public land laws if anyone wants it.

This operation over there in the Malheur National Forest has been in a development stage for about five years. Our first contract was made in 1923 with Fred Herrick. That involved the same identical forest area that is involved in the sale I have recently made to the Hines people. The contract with Herrick was canceled because of nonfulfilment of its terms.

Q. Has there been a tree cut, or anything milled or produced pursuant to the contract of 1923 that was entered into for the harvesting of this timber?

A. Nothing except in connection with the construction of the railroad, a small amount of stuff along the railroad right of (2402) way.

The Hines people have two years within which to commence operation and production. They must begin cutting, under the terms of their contract, by August 1, 1930; and their maximum cut under their present contract is to be 60,000,000 feet a year.

Q. Well, can they, or anyone else, obtain the contract to sustain additional or supplemental operation there?

A. You may recall the figures show that the permissible cut from that territory is 73,000,000. We have only sold 60,000,000; that is, the basis of the cut is 60,000,000 a year. There is a surplus there of 13,000,000 but our present plan is to hold that as a surplus until we see how things are cutting out on this first sale unit and check our estimates a little further.

The headquarters for this operation around which it circles will be at Seneca, and that is in what is called the Bear Valley.

Q. And the Bear Valley is a basinlike up there, well up on the mountain, or on the side of the mountain?

A. Well, it is a high, open—it is rather a table land.
1295 (2403.) Rather than a mountainside, it is comparatively flat.

Off to the east of Seneca there is additional timber owned in national forest ownership; accessible to Seneca by what is called the Bear Creek route. I think that is less than ten miles from Seneca into the timber. We haven't any restriction on that as yet; that is in this five and a half million, or rather billion. That could not be sold.

There has been no hard and fast rule applied, of which I am aware with respect to the cutting of timber in the same county in which it stands. But we have endeavored in every case with (2404)

which I am familiar to protect the local communities in so far as that can be done to a reasonable extent; and we have done that somewhat along the lines of county boundaries, inasmuch as the county is the local governing unit, and we have in a number of instances required that timber cut from a certain area within a given county shall be milled within that county. That would not necessarily follow in every instance.

It is a fact that the operation there in this Malheur Forest the milling operation, the manufacture of the lumber is to be carried on at Burns and it is so stipulated in the contract; at or near Burns. And in that instance a portion of that timber comes from a different county.

Q. (By Mr. DEY.) In any instance, Mr. Ramsdell, where the economies of the situation and the natural milling location require manufacture outside of the county, the economic law would be followed, wouldn't it?

A. Yes; I think that that in general would govern.

In giving the acreage in the national forests of Oregon at 13,000,000, with 9,000,000 such (2405) acres in Washington, I did not include in that 13,000,000 in Oregon the Oregon & California Railroad land grant, the title to which has been in the Federal Government since 1913.

1296 I did not include the lands in the Indian reservations. When you add to the national forests over which I have jurisdiction the large O. & C. grant, and the timberlands on the Indian reservations, I don't know what proportion of the timber in Oregon is in Federal ownership, but it is considerably, a good deal less than half of the timber is in Federal ownership; the reason for that being on an acreage basis it might, for instance, be half or over half, but on the volume basis the best stands and the heaviest stands are in private ownership.

Q. Now what is the increase in production that you expect, or increase in marketing from the timberlands of the national forests that you expect in the future as compared with the past? That is, in thousands of feet?

A. I could have readily brought along that figure and have given it to you on an accurate basis, but our increase is going to be very material in Oregon—several times over the (2406) present. We are cutting now I believe somewhere in the neighborhood of 250,000,000 feet a year only of national forest timber in Oregon—not a very great cut, compared to the total cut. Our total cut, for instance we figured it up last year and it was less than five per cent of the total cut of timber in Oregon that came from the national forests. Which would indicate that the timber on the private lands is being cut at a very much greater rate than on the Government lands. Our cut will increase very materially as the private timber is cut out. Our cutting will have to increase very materially, in order to sustain the present production of lumber from this State.

Exam. ROGERS. Do you expect any total increase from the State, from both Federal and private ownership?

A. Well, that is pretty difficult to forecast. I imagine that there will be an increase.

Exam. ROGERS. What leads you to that conclusion?

1297 A. Principally because of the situation in the adjoining State of Washington, where so many companies and mills are cutting out, completing their cut, shifting the cut into Oregon. (2407.) It is for that reason that the Forest Service has made no effort whatever to increase its cut. We believe it would be poor policy to make an effort to increase our cut at the present time. The fact is that the lumber industry in Oregon has been in a pretty bad condition for several years and in Washington too. The market has been glutted and the prices have been very low. Many mills on the verge of bankruptcy; that is common knowledge; and a great many closed down; they are closing down for longer periods, apparently than they have for a number of years.

Redirect examination:

Q. (By Mr. ELLIS.) Mr. Ramsdell, you stated that you expect, or I understood you to state that you expect the cut from national forest timber in Oregon to increase as other timber stands are cut out, and you referred particularly to the (2408) Washington timber. Are there other timber stands in the country which would affect the cut in Oregon in a similar way?

A. Yes; the condition in the so-called southern pine belt. The cut in that region is decreasing from year to year. It has not decreased as rapidly as a great many people, both Federal and private officers, or Federal officers and private timberland owners and loggers expected—not as rapidly as they have predicted; the reason for that being the great increase in the cut of the small mill in the South, picking up the small patches of timber here and there, by the little fellows, which has held up the cut. But the situation at present, as near as we have it, is that that is pretty well—that that cut is now dwindling, and the statistics show that the cut in the South is on a decline. Now the decline has not been—oh, it

1298 has been very appreciable, but it has not been by any large percentage. I imagine that possibly a ten per cent decrease in the cut occurred last year.

Exam. ROGERS. How long do you think it would take that decrease in the southern pine tonnage to make up for the overproduction which you say exists in the timber cut in this country? (2409.)

A. Well, that is a problem that is baffling the entire industry out here.

Exam. ROGERS. That would be the crux of the thing, wouldn't it, Mr. Ramsdell?

A. Well, not entirely. The South is a rapid timber-growing section. They are always going to grow and going to cut lots of timber. They will always have a big cut in the South, but they will decrease materially from the present cut.

Exam. ROGERS. I thought you were saying that due to the timber down in the South gradually diminishing, the cut out here in this country would increase?

Answer. That would follow naturally. It is bound to follow.

Exam. ROGERS. Yes; now if there is an overproduction in this country, wouldn't you have to set that up against the decrease in the southern tonnage to see how long it would be before you would have any increased production in this country?

A. Unfortunately those factors alone don't determine it. For instance, it would be entirely possible to have an overproduction in this territory, even though there were no cutting at all in the South. Overproduction is not confined to the Northwest; it is a national condition; it is not a regional condition. (2410.)

Exam. ROGERS. What other section do you have in mind than the Northwest?

A. The South principally. California is an important factor. I do not know the estimated amount of standing timber in the southern timber belt and the annual cut at the present time. I could not quote those. The information, to the best of our knowledge, to
1299 indicate how soon the South will cease to be an exporting section for lumber, the South will indefinitely be an exporting section in lumber. You understand, up to the present time they have done not only an exporting but a very heavy exporting. The degree of their exporting will change. The quality of their lumber product has decreased to some extent during recent years. I believe that has been a factor in the marketing of the Pacific coast lumber; enabling Douglas fir in particular to invade the eastern markets.

In comparing the production or cut of national forest timber in the State of Washington with that in the State of Oregon; Washington cuts more timber than any State in the Union, and Oregon is second. (2411.) I have in mind the percentage of cut of timber from national forest timber in Washington at the present time for the last year. I stated previously that in Oregon the cut from the national forests made up about five per cent, a little less than five per cent. In Washington it is a little less than three per cent. The cut in Washington bears approximately the same relation to that in Oregon from national forest timber; that is, they are not far apart. They fluctuate somewhat, but we have been cutting just about the same amount in the two States. The difference in percentage is because they are cutting more private timber in Washington than in Oregon. I have not given the total cut of all timber in Washington and Oregon. We have all of that information, of course, on file in our office. As I recall it, the cut in Washington, the last year figures which have been issued by the Census Bureau, about 6,000,000,000 feet; something like four and a fraction billion feet in Oregon. Those figures, however, can be readily verified. They are of record.

Exam. ROGERS. As I get your testimony, the mere presence of standing timber does not mean that it is going to be cut within the near future; is that right? (2414.)

1300 A. Well, applying that to national forest timber, or to private timber, or to both?

Exam. ROGERS. Would there be a difference?

A. Yes; there is. Private timber is, on the whole, going on the market more rapidly and being cut more rapidly than the national forest timber, and will be.

Exam. ROGERS. Does the presence of private timber mean that it is going to be cut within the near future, say within the next ten years?

A. No; it does not necessarily follow at all, there are so many different factors which will determine that.

Exam. ROGERS. And what would the situation be on the Government timber?

A. The same would hold true, except our timber, under all circumstances, will go on to the market more slowly than the private timber.

As to whether I have in mind the total timber stand in the State of Washington; no, I do not.

Q. Do you know whether the figures of total timber or lumber cut in Oregon and Washington which you have given approximately, represent about the ratios between the cuts in the two States over the past few years?

A. Well, those figures I gave were for the last year. I believe that Oregon has been in second place for about three (2413) years now, and previous to that Louisiana was in second place, showing the decrease in the cut in the South and the increase in the cut in the Northwest. But, in general, the cut in Oregon has been increasing more rapidly than any changes that have been taking place in Washington.

Q. Now do you have in mind any estimates of stumpage value of Government timber in the Columbia River area as compared with stumpage value of the same kind of timber down in Douglas County?

1301 A. There is no national forest timber in the Columbia River territory below Portland. I don't know the value of private timber enough to quote it. I know in a general way that it is naturally considerably higher than it is in Douglas territory. I would hesitate to express that approximately in dollars per thousand, because of the fact that we have no direct dealing at all with the timber in this Columbia River territory below Portland.

I presume the accessibility to water transportation is the principal factor why there is a substantially higher price in the Columbia River area than in Douglas County or other southern Oregon points. (2414.)

In my opinion the factors that have contributed to the more rapid cutting of the Washington coast timber belt as against the Oregon

coast timber belt (2415) west of the Cascades, from the summit of the Cascade Range to the coast, I would imagine it would be principally a matter of transportation; affected by the harbors and the ocean transportation. Of course, Puget Sound has a very great bearing on the Washington situation and there is considerable shipment at Grays Harbor. There is considerable moved out of Willapa Harbor over here on the Washington coast.

Comr. McMANAMY. Will you give an expression of your views now with respect to the entire State? Along the same lines of Mr. Dey's questions. You confined your answer to west of the Cascades. How would you change it, or would you change it, as it applies to the entire State?

A. That is, as between the two States?

Comr. McMANAMY. Yes; the same question applied to the entire State. (2416.)

A. Well, I think it is true that up until the more recent railroad development in eastern Oregon that eastern Washington has had better transportation facilities, railroad transportation, and on that account such timber as they had has been going out more
1302 rapidly. Of course, eastern Washington doesn't have near as good or near as large a quantity of timber as eastern Oregon has.

Exam. ROGERS. What becomes of the land when they cut off timber out there? Down south much of it when they cut it off, why, the stumps are cleared out and they farm it. Is that true out here?

A. Well, that varies with the land and the ownership. The national forest land lies almost entirely in a rough and rugged country at comparatively high elevations, where agricultural use is practically out of the question. In the privately-owned timberlands, a small proportion of cut-over land is yearly going into agricultural use. It is quite a small per cent.

Comr. McMANAMY. Well, is it not the policy to maintain the national forest lands as forest lands permanently?

A. Yes, sir.

I don't know as to the percentage of the timberlands of Washington in the beginning that were in private ownership. (2417.) Most of this timber that has been cut over in Washington has been cut from private timberlands, where the cutting is always much more rapid than on timber in the national forests.

Mr. SPENCER. Well, Mr. Ramsdell, if I might ask, the commissioner asked you for a comparison as to the whole State, and you referred to the greater railroad service enjoyed in eastern Washington, as I understood you, better transportation service and more of it. Now, does eastern Washington have as much pine timber as eastern Oregon?

A. No; it doesn't, because, as I mentioned, there is nowhere near the amount of timber there to cut. They don't have the opportunity for cutting. (2418.)

J. S. MAGLADRY was thereupon produced as a witness on behalf of complainants, and, having first been duty sworn, testified as follows:

1303 Direct examination:

My name is J. S. Magladry; I live at Eugene and am engaged in the manufacture of lumber. I have been engaged in the manufacture of lumber in the Willamette Valley, in Lane County, approximately 28 years. As to the extent of my own operation, I cut about twelve to thirteen million a year. I ship out about 25,000 to a carload. You can estimate that on the basis of 25,000 to a carload. I haven't got those figures; it would be about 520 cars a year.

I am familiar generally with lumbering operations in the fir district in the entire Willamette Valley; and have been over a considerable period of years. (2419.)

The name of my company is Bohemia Lumber Company and the mill is located south of Cottage Grove about three miles in Lane County. My company is a member of the Willamette Valley Lumbermen's Association. The Willamette Valley Lumbermen's Association at the present time have 32 members, representing a cut of about 120 carloads a day, or 36,000 carloads a year. The mills of the members of the Willamette Valley Lumbermen's Association, generally speaking, are located from Salem south to Cottage Grove, at different points in the Willamette Valley. They are all manufacturing, generally speaking, the same kind of lumber products.

The mills of the Willamette Valley Lumbermen's (2420) Association membership in the valley association is confined exclusively to rail shippers. About 70 per cent of the products of the mills of the Williamette Valley Lumbermen's Association goes east, into the Middle West and East. That would be 70 to 75 cars a day.

I, myself, am president of the Willamette Valley Lumbermen's Association. Briefly, the purpose of the Willamette Valley Lumbermen's Association is to mutually assist the membership in
1304 marketing conditions, and discuss operating methods, and all that sort of thing.

I should say the members of the Willamette Valley Lumbermen's Association are interested in transportation problems. That is a large question. (2421.) The Willamette Valley Lumbermen's Association does not include in its membership all of the manufacturers of lumber within the territorial limits of the Willamette Valley.

I can give you, in just a moment, how many mills, about, there are in the entire territory and about what the production of the entire lot, including the 32 members of my own association is. Well, in the Willamette Valley territory, comprising the counties of Benton, Clackamas, Douglas, Jackson, Josephine, Lane, Linn, Marion, Polk, Washington, and Yamhill, including the members who are exclusive rail shippers with mills located on or tributary to the

lines of the Southern Pacific, and who produce approximately 325 carloads of lumber daily, or approximately 96,500 carloads annually, and distribute for labor approximately $80,000.00 a day, or $24,000,000.00 annually. That is all of the mills in those counties of the Willamette Valley, including the Willamette Valley Association. Corresponding figures for the amounts expended for labor by the mills of the Willamette Valley Association; I have it here. About $30,000.00 a day, or $9,000,000.00 a year, for labor.

I said, that 70 per cent, approximately (2422) of the rail shipments of lumber out of the Willamette Valley went to the East and to the Middle West. The remaining 30 per cent principally goes to California.

The principal change in the marketing of lumber that has taken place within recent years, as it has come under my observation and that of other manufacturers in the Willamette Valley, is the
1305 demand for quicker deliveries. The retail yards don't carry the stocks that they used to a few years ago, and where we used to accept orders for delivery in 60 or 90 days, it is a very common thing now for them to place delivery in 30 days. It is quicker delivery. At the present time the quickness of delivery of lumber is a very important factor in its marketing.

I do not know of any section of the United States producing in large quantities that is more remote from the largest consuming markets in the eastern and central and middle western sections of the United States than the Willamette Valley. (2423.)

The Willamette Valley lumber mills in selling their lumber are in competition with lumber mills in other producing territories in the United States. As to where some of the other principal producing territories in the United States are with which the Willamette Valley mills are in competition; well competing with the southern and eastern pine. We are competing also with manufacturers of pine lumber in California, Oregon, Washington, Idaho, and Montana, in eastern markets.

Q. What would you say the character of that competition is between the various lumber producing sections of the United States in the sale of lumber in eastern and central and middle western markets in this country? The character of the competition? Is it anything you have to pay any particular attention to or not?

A. Well, competition always affects price, and where they have advantages over us on freight rates, why, in order to make a sale we naturally have to drop the price to meet that competition. (2424.)

The mills of the Willamette Valley, generally speaking, cannot fix any price they may choose to ask and get it in selling lumber in eastern markets. In certain grades of lumber the competition in selling Willamette Valley lumber in eastern markets is keen; that is, the competition we encounter in selling with other producing sections. In structural timbers, no, but in house-building
1306 lumber, or what we call the yard stocks, why, the competition is keen. Structural lumber, no.

Q. Now, you said that often you would get an order nowadays for delivery in 30 days, where before it was common to specify delivery in 60 or 90 days. Orders nowadays, as contrasted with those in former years, are they in the same volume as they used to be? That is, will the orders be for as many cars at a time as they used to be?

A. No; the orders are smaller orders. The orders are smaller. They are ordering in less quantity at a time and demanding for their delivery; that is why they are demanding quicker delivery, because they are ordering in less quantity at a time.

Exam. ROGERS. Where did you say shippers were located that had the hundred or more cars a day, did I understand, members of your association? (2425.)

A. I don't get that.

Exam. ROGERS. Where are the members of the Willamette Valley Lumbermen's Association located?

A. The members of the Willamette Valley Association are principally located in the valley south of Salem, between Salem and Cottage Grove—that is, Marion County on the north and Lane County on the south.

Exam. ROGERS. Well, for those shippers the matter of shorter mileage, the cross-State line as proposed would be about the shortest mileage to the East, wouldn't it?

A. Yes, sir.

Exam. ROGERS. And I believe you said 70 or 75 cars a day goes to the Middle West and to the East?

A. From the association?

Exam. ROGERS. Yes.

A. Yes.

Exam. ROGERS. That is, from this territory located between Salem and Cottage Grove?

1307 A. Yes, sir.

Exam. ROGERS. In the valley?

A. Yes, sir.

Exam. ROGERS. Now, you say that time is an important element?

A. Yes, sir.

Exam. ROGERS. That being true, how much of these 70 or 75 cars a day going to the Middle West and East can be depended (2426) on to be routed over the cross-State line, if it is built, by the shippers?

A. Why, it would seem to me that it would all go that way, because the particular purpose of the valley lumbermen in favoring the cross-State line is to make quicker delivery through the shortening of the distance, and good business would dictate that they would send it all that way, otherwise they wouldn't get the benefit of shortening of the distance and the quicker delivery, as I understand it.

Exam. ROGERS. Do you feel, then, with reasonable certainty that these 70 or 75 cars a day can be depended on?

A. Why, I feel that every carload going East would—should go that way. Any shipper to get advantage of what we are trying

to get, to make quicker delivery, would naturally route his stuff that way, in order to get it there quicker.

Exam. ROGERS. Do you now ship about 520 cars a year from your own mill?

A. Well, whatever that figured; put it down as five hundred.

Exam. ROGERS. That would be something like two cars per working day. And where does it go? To the Middle West and East? (2427.)

A. Yes; to the Middle West and East. That is, not all of it. Out of our—my own plant ships probably 50 per cent of its cut to California. I would have about one car a day, then, going to the Middle West and East.

1308 Exam. ROGERS. Well, can you say what would happen to that one car, as to the routing, whether it would go over the cross-State line or not?

A. Oh, absolutely it would go over the cross-State line, sure.

1309 PORTLAND, OREGON, *August 16, 1928.*

J. S. MAGLADRY thereupon resumed the stand and further testified as follows:

Direct examination—Continued.

Neither our association, nor my concern employ a traffic manager. The purchaser of lumber ordinarily pays the freight charges and deducts it from the invoice. The shipper actually pays it, but the purchaser pays the expense bill on the receipt of the car and deducts the amount from the invoice. (2429.)

Sometimes the purchaser specifies the routing; speaking generally the purchaser names the route.

Comr. MCMANAMY. Does that go to the extent of naming the full routing, or only the line from which he will take delivery?

A. Well, they generally name—a large part of the sales are made through wholesalers, and the wholesalers generally specify the routing in the order. The shipper does not necessarily follow those instructions so long as he lands the material on the line of delivery to the purchaser.

Exam. ROGERS. Can you tell us how the lumber shipments are routed at the present time from this territory from Salem down to Cottage Grove?

A. How they are routed East?

Exam. ROGERS. Yes, sir.

A. Oh, they are generally routed from down there by Roseville Junction over the Southern Pacific.

Exam. ROGERS. What percentage of them would you say are routed Southern Pacific through Roseville?

1310 A. Well, from the Willamette Valley they practically all go there. (2430.)

Exam. ROGERS. And that would mean that comparatively few go through Portland?

A. Yes, sir.

Exam. ROGERS. Well, if time is the important factor, why don't they route it through Portland instead of Roseville?

A. I don't know as I can answer that. I didn't know that there was much difference between the routings by Portland and Roseville in time.

Exam. ROGERS. Do you know what the difference is in time between, say, Cottage Grove and a given point east by the Southern Pacific road or route as compared to the Portland route?

A. No; I do not know the difference.

This proceeding for the construction of the cross-State line has been the subject of very much discussion among the members of the Willamette Valley Lumbermen's Association, and the question of routing of their traffic over it, if built, has also been the subject of discussion among the members. The reason they favored the line was because of the shortening of the time and of the distance. (2431.)

Inasmuch as the shortening of delivery time is the vital question, I would say that practically all of the shipments of other members of the Willamette Valley Lumbermen's Association to eastern points, as well as those of my own company, would be routed over this cross-State line, if it were built.

Exam. ROGERS. Mr. Magladry, does there seem to be anything illogical about that in your mind, to say that all shipments would be routed via the cross-State line, if they are now using the longest route that is available as compared with a much shorter route?

1311 A. Well, I don't know. It seemed to be the general impression that there would be a saving in time by the cross-State line of at least three days.

Exam. ROGERS. How much?

A. Three days.

Exam. ROGERS. To where?

A. Chicago.

That would apply to any point east of Granger, Wyoming, as well as to Chicago. (2432.)

That would mean that the three-day saving would have to occur between the point of origin and Granger.

The character of business done by the Williamette Valley fir mills is what is generally called retail yard stock, house-building material. This is stock we already have on hand and can be loaded right into the car. Special orders for special construction have to be specially cut and specially prepared. (2433.)

25 or 30 per cent of the business of our mills is special-order business. That means that we have to cut and prepare the lumber before it can be loaded; certain grades of lumber out of certain quality and certain lengths of logs. It takes time to do that.

We made a check-up on yesterday and found that the average number of days required for lumber to move from Eugene to Chicago on recent shipments, was 16; the shortest time 14 days, and the longest was 18 days.

The Willamette Valley Lumbermen's Association intervened in support of the complaint in this case for numerous reasons. In the first place it was their thought that railroad development makes for the general (2434) development of the State. General development means more business. Competition in transportation gives us better service. The shortening of time into Chicago
1312 is another case of better service, which means more business, and then, particularly, we have a disadvantage in getting into Idaho points, where we feel we would be entitled to a revision of rates that would increase our business materially. The rate on fir lumber from Portland to Boise is 39½ cents; from Eugene to Boise 44½ cents, a difference of 5 cents. On 2,500-pound lumber, the weight of average fir lumber, and at 25,000 feet to the carload, there would be a difference of $31 a carload on lumber to Boise. That difference shuts us out of Boise and surrounding territories entirely. (2435.)

At an eastern point in Southern Idaho, Pocatello, for instance, there is a difference of 2½ cents in favor of Portland as against the Willamette Valley, which represents just half the difference on the carload, or $15.00 or $16.00. It puts us out of business in competition with Portland mills. At the present time Willamette Valley lumber shipped to Southern Idaho would have to come through Portland then go East over the O.-W. R. & N. and Oregon Short Line. Eugene is 125 miles south of Portland and Cottage Grove 22 miles further south. 2436.) Eugene is fairly representative of the center of lumber production in the Willamette Valley south of Portland. If we had an even break with Portland in the Southern Idaho territory it would increase our volume of business very materially and the construction of this cross-State line would give us an even break, so far as distance is concerned.

Comr. McMANAMY. Do you know whether or not the same condition applies to lumber manufacturers in San Francisco? That is, how is the rate from Eugene as compared to the rate from California points?

A. I could not answer that question. There is no lumber manufactured in San Francisco. (2347.)

1313 In billing lumber to eastern destinations we insert in the bill of lading the routing to be followed by the shipment. That is the practice of the Willamette Valley mills generally. All lumber shipped by rail from the Williamette Valley is sold delivered at destination. That is the universal practice.

As to the importance to Willamette Valley mills of a competitive rail route, or a new rail route east, that they could use in addition to the ones that they have at the present time, it has been our experience that all railroad development means general development of the country, and that always means more business. On the Coos Bay line it has increased our lumber sales so that we are shipping lumber now right down into a lumber country, and we are shipping

fir lumber into Klamath Falls right now for purposes where the fir is more suitable than the pine.

The lumber industry of the Willamette Valley in the past has encountered (2438) more than one very serious car shortage, which has had the effect of shutting off business and a loss of orders. (2439.) It is the thought of members of the Willamette Valley Lumbermen's Association that the building of this cross-State line and the shortening of distance and time in shipping to eastern points of destination would have the effect of an insurance against the recurrence of car shortages they have experienced in the past. If we are going to lessen the time of delivery east three days, there would be the same lessening of time in the return of that car. But with the cross-State line a car would go east and come back again in six days less time than at the present time, other things being equal.

Exam. ROGERS. Do you expect to get the same cars back that you send east?

A. Not necessarily. Not necessarily the same cars, but some cars have got to come back.

1314 Exam. ROGERS. Well, how do the members of your association think that this protection against car shortage can be brought about other than this shortening of time bringing in the empty cars?

A. Answering Mr. McCulloch's question, which was what I was trying to do, it will take a car six days less time to make a round trip. That answers the question.

Exam. ROGERS. That was the only reason you had?

A. No. That is the way I would answer his question, as to the effect it would have as a protection against car shortages. (2440.)

Exam. ROGERS. Yes; but you said that the members of your association had given consideration to the probable elimination of car shortage due to the construction of this proposed line?

A. Yes, sir.

Exam. ROGERS. Now I ask you how the members of your association thought that elimination would be brought about.

A. By a car making a round trip in six days less time.

Exam. ROGERS. Any other reason?

A. No; not as a protection against car shortage.

It is my thought, and the thought of the members of my association, that the release of a car for the loaded movement east and the empty movement west six days sooner than if it went via the Roseville route, would be the equivalent of so many additional cars added to our supply.

The members of the Willamette Valley Lumbermen's Association look on the construction of this line from Crane to Crescent Lake as a convenience and necessity in the interest of the public.

Exam. ROGERS. When did you have your last car shortage, Mr. Magladry?

A. Well, we have experienced no car shortage for the past three or four years. (2441.)

1315 Cross-examination:

In a general way I would say that wholesalers, as a rule, purchase and dispose of the lumber product of the mills of our association; there are a large number of wholesalers or lumber brokers engaged in that business practically exclusively. As to Eugene and Portland, I would like to qualify my answer there a little. The larger operators maintain sales agencies themselves in the various eastern points, and in that case the wholesaler has nothing to do with specifying the route. The smaller operators who do not maintain sales agencies make their sales through the wholesalers, and the wholesalers name the routing. The mill doesn't necessarily following the routing specified by the wholesaler, only make sure to get it on the delivery line, or on the line that goes to the purchaser. Speaking generally, they do follow the routing specified. We do not have any particular broker who handles our lumber. (2442.) We deal with several different ones.

A large percentage, a very considerable percentage, of the output of our Willamette Valley mills is purchased by different railroad companies. As to whether we make our purchases to brokers, I qualify that question. Down in the valley our sales are made almost exclusively to the Southern Pacific, so far as the railroads are concerned. We are not available to the others. We participated in the recent large purchase by the Pacific Fruit Express Company; I understand the Southern Pacific Company and the Union Pacific are joint owners in that enterprise. The sales there and distribution to the various mills were not necessarily worked through brokers. It isn't the policy of the railroads to work through purchasers; the sales are made and orders are placed through their purchasing department. (2443.) As to whether the purchase of

1316 that particular order was made through four brokers—there was a combination of mills that got together and handled that business; it was not handled through brokers that I know of. We had contact with some of the other mills; they divided up their business with us, and we didn't have contact with any broker at all. I couldn't answer the question now as to where our routing instructions came from. I am not taking an active part in my mill, and I don't know just what the instructions were or where they came from; I imagine they would come from the purchasing department of the Pacific Fruit Express, the natural place. The brokers, or the wholesalers, are the big purchasers from the smaller operators.

By the Willamette Valley, that is the southern part of it, I mean the western Oregon mills. (2445.) Cottage Grove is in the Willamette Valley; it is the head of the valley. The mills in the valley having their own sales agency in the eastern markets are the Booth-

Kelley Lumber Company, the Silver Falls, at Silverton, the Hammond Lumber Company, and the Spaulding, all of which are members of the valley association. These four mills represent a large part of the valley association. There are thirty-two mills in our association. As I testified yesterday, there are about three hundred mills in western Oregon, three hundred and twenty-five I think. (2445.) The brokers or wholesalers who purchase from those three hundred mills, excluding the four that I mention, sell their product to a considerable extent while it is moving to the destination; there is some diversion enroute as they accomplish their sales, but not much. A small part of the shipments are diverted. Take it at such times as 1920, when the lumber business was at its peak and these fellows were speculating in lumber and speculating in the price of lumber, there was quite a little bit of diversion, but when conditions are as they are now and have been for the past few years there is very little of that done. The stuff is bought after it has been actually sold and there is no necessity or occasion for diversion.

1317 It is the desire of the members of my association to save some three days time to eastern markets in moving our lumber; the association has discussed that feature and expressed its desire to bring that about. (2446.) The Portland or Tillamook mills are not members of this association; the membership in the valley is confined exclusively to rail shippers.

Q. Well, do you include shippers in Yamhill County?

A. Yes, sir.

Q. In Washington County?

A. I don't know as the association does in Yamhill.

Q. Well, Spaulding is in Yamhill.

A. Yes; that is so.

In the discussions I did not hear any comment about the time consumed via the Portland route as compared with the Roseville-Ogden route, but yesterday they did ascertain the average time to these 16 days to Chicago. They checked up from expense bills just as they took them off the file to ascertain the time if they went via Portland and Granger. (2447.)

Q. That is, via Ogden?

A. Both ways. I am assuming that it is both ways.

Q. Well, now, do you know whether it is both ways?

A. I do not. I wired for this information last night to the Booth-Kelly Lumber Company, and they took their expense bills, their recent expense bills, as they came to them, of cars shipped to Chicago and checked them off.

I imagine Booth-Kelly ships altogether via Ogden, but I don't know.

Exam. ROGERS. Where are they located?

A. Eugene. The mills are in Wendling and Springfield. The head offices are at Eugene.

The mills are just out of Eugene, on the branch line of the
1318 Southern Pacific; the Springfield mill reaches the Cascade line of the Southern Pacific at Springfield. I don't know whether the regular schedule via the Union Pacific system lines from Portland to Chicago on lumber is 9 days or not. (2448.) We move our lumber in one day to Portland. It takes us 16 days on an average to go via the Roseville route, according to information that was ascertained through checking a number of expense bills yesterday. I don't know why, with that great disparity in time, if time is the factor, none of this lumber moves to speak of via Portland. It would seem that there must be some reason, if it doesn't move via Portland, and there is a difference of five or six days from Eugene to Chicago via Portland as compared with the Roseville-Ogden route, for shipping it via the Roseville-Ogden route, but I don't know what that reason is. (2449.) I did not say yesterday that our association mills would ship 200 cars a day east via the cross-State line; I meant all the western Oregon cars.

Q. Would that include Tillamook and Portland?

A. No; we don't include Portland in any of our estimates.

Q. Well, you wouldn't include Tillamook, either, would you, if it comes down through Portland?

A. I think Tillamook is in this. I have got a complete statement of all the mills in the Willamette Valley and their capacity and conditions of operation, and all of that, recapped in here; I would have to refer to it to answer your question.

Exam. ROGERS. I noticed that 200 cars in the papers.

A. I noticed it in the Oregonian this morning.

Exam. ROGERS. I didn't recall the——

A. I stated these——

Exam. ROGERS. Wait a minute. Of course, the record will show, but I didn't recall the figure 200 being used at all. I have it 'a hundred cars a day in this territory from Salem down to Cot-
1319 tage Grove, about 70 per cent, or 70 to 75 cars of that 100 cars went to the Middle West and the East.

A. In other words, I think I said that 70 per cent of the shipments of the Willamette Valley went east, and that was reduced to carload lots—— (2450.)

Mr. ELLIS. What was this hundred cars a day? Was that your association mills, or all mills in that territory?

A. I said that the Willamette Valley Association represented a cutting capacity of 120 carloads a day, that 70 per cent of it went to the Middle West and East.

That is the capacity of our association's mills; the capacity of the total three hundred mills is about eight million feet a day.

Q. It has never been reached, even in the peak of 1920, has it?

A. How is that?

Q. They never have operated to capacity, even in 1920?

A. The figures I am using was information that was assembled on the 16th day of June of this year.

Q. Well——

A. We show what mills are operating, those that are down temporarily, and those that are down permanently. I have got the whole record here.

Q. Well, I would ask this question, if you will, please, Mr. Magladry: How many cars a day would you estimate would be available for shipment via the cross-State line from western Oregon? (2451.)

A. Well, it should reach about 200 cars; taking 70 per cent of the capacity, over three hundred carloads a day capacity, and 70 per cent of that would be practically 200.

Q. Yes. Now, I notice by the exhibit introduced as Exhibit 26, Mr. Wiggins for the State, the petitioner, at page 36, the total number of cars of forest products moving east through Portland via all gateways, the Great Northern, Northern Pacific, and
1320 Oregon-Washington Railroad & Navigation Company, is 2,756 cars for 6 months, or 5,512 for the year, that the total of forest products moving east from western Oregon via the Ogden gateway is 10,015 cars for six months, or 20,030 cars for the year, making a total of 25,542 cars. That would be about 85 cars a day if all of them were turned over and moved via the cross-State line. You wouldn't expect to increase that more than a hundred per cent, would you?

A. Why, Mr. Spencer, the only answer I can give you is to say that we have got the cutting capacity of these mills, and our information is that about 70 per cent of it goes east, and that answers the question. I can't combat another man's statement as to——

We do not include Portland. (2452.) Portland has some of the largest mills in the State, Inman-Poulsen, Eastern & Western Lumber Company, and several of the other mills there on tidewater, but we have some mills in the valley that will equal anything they have. I think Silver Falls mill will cut as much lumber as Inman-Poulsen or the Eastern & Western Lumber Company. Silver Falls have a two-shift capacity of half a million a day, Silver Falls at Silverton; Mr. Woodward operates it. They have a large production in Portland, but a large part of it is shipped out by water. That is true as to Eastern & Western and Inman-Poulsen; they make heavy sales right here in Portland; the large part of their sales is water shipments.

Q. Where is this big mill, at Silverton——

A. At Silverton.

Q. The Silver Falls Timber Company at Silverton?

A. Yes; sir.

Q. Well, that is as close to the eastern market via Portland, practically, as it would be by the cross-State line, isn't it? It would be closer?

A. Closer to Portland? (2453.)

1321 Q. North of Salem, isn't it?

A. Yes, sir.

Q. Well, you don't think any of that lumber would go via the cross-State line, do you?

A. I don't know why it shouldn't.

If it is an advantage to go out of Eugene they can go to Eugene from Silverton as quick as they can go to Portland, and then we have got the saving of time across the State. Silverton is just north of Salem a little bit, forty-six miles south of Portland—and a water level grade and main track available by the Southern Pacific. There is a difference there of forty or fifty miles as between going by Eugene or Portland. The rate would be practically the same. There would be no difference in the freight rates, it seems to me. It is about 75 or 80 miles from Silverton to Eugene. (2454.) They have got the same rate via all these gateways, and they are within 46 miles of Portland, and 80 miles from Eugene, but I would think, other things being equal, they would take the cross-State line as against the Columbia River route as they would save the time of delivery; they would make their delivery by the cross-State line shorter even assuming that 75 miles.

Q. Well, are you sure about that? The equidistant point by the cross-State line as compared with the Portland gateway is Salem, isn't it?

A. I would answer that question by saying this, Mr. Spencer, as I understand it, the distance that is saved east via the cross-State line is 429 miles. Now, can't they afford to ship 75 miles excess on this end to save 429?

Q. I would think they could, and I am wondering and inquiring for the reason that they don't right now—a difference of four hundred and how many miles did you say?

A. '29, I understand.

1322 Q. That is from Eugene to Granger via Ogden?

A. Yes.

Q. Is longer by 429 miles than it is via Portland, and yet they ship via Ogden. Now, the difference I was asking you about was as between the cross-State line and the Columbia River route. (2455.)

Mr. McCulloch. Just a minute, Mr. Spencer. Weren't you confused in your question? Did you say that the route via Roseville and Ogden was 429 miles longer than the route via Portland to Granger?

Mr. Spencer. That is what I understood the witness.

Mr. McCulloch. No; the witness said that the distance is 429 miles less via the cross-State line to Granger.

Mr. Spencer. Yes. I don't want to mislead you. You were comparing Ogden with the cross-State line when you made that difference of 429 miles?

A. Yes.

I don't know how much closer it is to Granger via Portland from Eugene; I know there is a very considerable advantage in distance via the Columbia River route. I don't know whether it is

426 miles shorter to Granger via Portland than it is via Ogden or not. (2456.)

Q. But, now, with all of the Portland mills, the Tillamook mills, and all the western Oregon mills shipping a total of 25,542 cars east a year, via all gateways, north and south, and through the middle route via the Union Pacific, how do you anticipate that you are going to move presently upon the opening of the cross-State line over 60,000 cars a year?

A. From the capacity of the mills and the percentage that goes East.

Q. But not by any performance that has ever taken place?

A. I have no information or any knowledge of your information in regard to twenty-five thousand cars a year.

1323 Q. Well, I am quoting from the record here Mr. Wiggins, who analyzed all the shipments, and it is in Exhibit 26, page 36, a summary at the bottom of the page.

A. I don't know anything about that at all.

Q. And taking actual movements for six months, alternate months through the entire year. Now, is that the only explanation you have, Mr. Magladry?

A. Yes, sir.

The western Oregon mills sell to the railroad, but we are not available to the Union Pacific, or the railroads comprising the Union Pacific system. (2457.) That is because they are of a disposition to buy stuff along their own lines, and they don't come into the Willamette Valley, and consequently we don't get any of that business. There is another reason they can't buy on a parity in western Oregon territory, because they have got to pay a freight rate if they have delivery at Portland; so it would be natural that the western Oregon mills would favor the purchasing railroad, the railroads that purchase their product, if they could. I am not so sure that that natural condition would continue whether there is a cross-State line or not.

Q. Why don't the—the same reasons that actuate these same men will continue to operate as effectively and in the same human way when the cross-State line is built as they do now, won't they?

A. I think they are looking forward to the time when probably there will be a common-user agreement in operating the Natron cut-off, and the cross-State line will be available to the Willamette Valley. (2458.)

The western Oregon mills want competitive operation and better service, better territories to reach, and better deliveries. It is the assumption of that condition by me that I proceed upon in the discussing and in the testimony I have given—we believe

1324 that the building of the cross-State line will develop a territory there that would give us more business, it will be advantageous to the whole State of Oregon from the standpoint of development, and it particularly affects the lumbermen from the standpoint

of making their quicker deliveries east, and possibly getting a better rate into certain points in Idaho. Those are the reasons, and at the same time they are hopeful of someone making an agreement or common user that will let the builders of the cross-State line, whoever it might be, enter the Willamette Valley and serve the mills in the Willamette Valley.

The Denver & Rio Grande and the Missouri Pacific are heavy purchasers of lumber in the Willamette Valley. (2459.) The Denver & Rio Grande takes delivery at Ogden, and the Missouri Pacific takes it from the Denver & Rio Grande. The other railroads, including the Santa Fe, purchase some. You have named the railroads that are the principal purchasers of lumber in the valley (2460.)

Common or joint use of the Natron cut-off by the Oregon-Washington Railroad & Navigation Company, which would bring it into Eugene, would benefit us and the other mills in the valley. Although it wouldn't reach our plant, we would have access to the road that had the common user or the operating agreement. There is no sawmill at Eugene; we are located twenty-five miles from there. I think it would be more helpful for us to have the O. W. R. & N. stop at Eugene than to have it stop at Portland, where it does now. We would still be upon Southern Pacific rails (2461), with a competing carrier 45 or 50 miles away. Booth-Kelly at Springfield is much closer to Eugene than we are. To have the competing line over into Eugene stopping there would benefit us because we would have access to the Union Pacific for shipments over the Union Pacific lines, if they had a common user over the Natron cut-off, and we could reach territory on the Union Pacific that we can't reach now. And another big advantage to us, we would have another railroad to sell to which we don't have now. We can't sell to
1325 the Union Pacific now where it reaches Portland because they don't buy material off of their lines. If they only reach Eugene, didn't go beyond that point south or west or north in the Willamette Valley, our mill and the other mills of our association would all still be off their line, but (2462) I have an idea that, if the Union Pacific had a common user over the Natron cut-off, arrangements would be made so that we could reach that; that the common or joint use would be extended out so that the mills reasonably tributary to that line could reach it.

We cut twelve or thirteen million feet a year; the capacity of our mill is about 60,000 a day. We try to run by the year—300 days a year—there is a certain amount of lost time there, about 50 days, the average would 250 days. (2463.) We are now cutting an average of about thirteen million a year which, we figured up yesterday, would equal five hundred twenty cars, I think.

Q. Now, according to the records of the Southern Pacific Company, you shipped last year, locally and to all points, 335 cars. Do you think that is about right?

A. Well, we were closed down on a logging construction for several months last year. I think we lost three months time last year. We are closed down now—none of the mills are trying to crowd capacity just now. Because of overproduction and the low prices resulting therefrom the market has been in a very bad condition (2464) more or less for the past three years.

Some of our bigger operators, like Silver Falls Timber Company, at Silverton, and the Willamette Valley Lumber Company over at Dallas, and the Spaulding Company, ship a pretty fair percentage of their product into Portland and it is then moved out by water. Export rates have been made for the benefit of our valley mills, in order that they may get into the tidewater distribution here at Portland. This item runs into several hundreds of
1326 cars a year, and to that extent some of our association mills are water shippers.

Exam. ROGERS. Did I understand, Mr. Magladry, some of these 120 cars a day would come from Yamhill County?

A. No—a part of it, yes. I think that we have one member in Yamhill County, the Spaulding Lumber Company. I think that is the only one. One mill is represented in this capacity of 120 carloads a day in Yamhill County. (2466.)

Exam. ROGERS. How large a mill is that?

A. I think they cut about 125,000 a day.

It is one of the large mills in our association, but not one of the biggest.

Exam. ROGERS. Is there any mill included in that 120 cars that is in Tillamook County?

A. No, sir.

Exam. ROGERS. Washington County?

A. No, sir.

Exam. ROGERS. Polk?

A. No, sir; not in the 120 carloads a day. (2467.)

We will probably ship to all points, locally and otherwise, about eight or nine million, that is about 400 cars, from our mill this year. We have practically no local distribtuion in the vicinity of Roseburg. We don't ship anything to Portland, the sash and door factories there don't use our material. We have shipped an occasional car—last year we shipped some seven or eight cars in to a remanufacturing plant here in Portland—the eighteen cars shown by the Southern Pacific Company's record as loaded and shipped to Portland was a little bit unusual. We are not doing it now at all. (2468.)

Q. And of the 335 cars that you shipped to all points last year the railroad company's records show that you shipped 135 into California and territory beyond south. That is about the usual proportion, is it, of your shipments to the south?

1327 A. Well, doesn't that verify my statements as to 70 per cent going east? I think it does.

Q. No, not of your business. That is what I am trying to get at. Now in order to make it clear, let me read you, your mill, according to the railroad company's records, shipped locally around your part of the State in 1927, 22 cars; that is to Roseburg and Eugene and Springfield, and so forth; you shipped 18 cars to Portland, 135 cars into California and other Southern Pacific territory where it is served by the Southern Pacific lines, and 11 cars over into Washington, Montana, and North and South Dakota, and 149 cars into the Idaho-Utah-Wyoming-Colorado territory and territory east thereof. Does that sound about right to you, according to your judgment?

A. Well, that is 50 per cent going east.

Q. Yes, Idaho and Utah.

A. My statement yesterday in regard to the shipments of our own mill was 50 per cent. You will find that in the record. (2469.) The lumber brokers to whom we sell our output always specify the route and we generally follow their request as a matter of courtesy. Sometimes we are affected because of conditions and our relations with the road and we are entitled to make our own routing so long as we deliver the car on the line of the purchaser where he has a siding.

Redirect examination:

The opportunity to make quicker delivery of a car of lumber from the Willamette Valley, and to use the shortest possible route to get it to an eastern destination, would be as important to a lumber broker as to a lumber manufacturer. (2470.) A lumber broker, in specifying or requesting a manufacturer to specify routing of a car of lumber to an eastern destination, would not overlook an opportunity to use a route that would save him in distance and in
1328 time of delivery three days as compared with another route that the car might move, the rates being equal.

We have not experienced any car shortage worth mentioning within the past three years, they always occur when the markets are unusually good. (2471.) The depression in the lumber business is bound to affect the supply of cars.

Exam. ROGERS. Do you know, Mr. Magladry, when you had the car shortages—I take it it was back of 1925?

A. Yes.

Exam. ROGERS. Was there any complaint about it to the commission?

A. Well, I don't know as there was any complaint to the commission, but I know that this same Valley Association that was active at that time had a lot of trouble over it. It was our information that it was not so much a case of shortage of equipment on the part of the Southern Pacific as it was on account of the incapacity of their roads to get them up north. All of these cars had to come through California and they could not get the empties over the hill and

they could not get the loads out. I have seen the thing jammed here where every siding from Eugene to Siskiyous was full of loaded cars that they could not get across the mountain.

That was prior to 1925, I am not claiming any car shortages in 1925. (2472.)

Exam. ROGERS. Was it because of that situation that the commission conducted an investigation into the transportation facilities of the Northwest?

A. I don't know.

Comr. MCMANAMY. Mr. Magladry, have you any knowledge of any instance where the commission ordered a large number of cars routed via Portland because the Siskiyous were blocked?

A. No, I have not.

1329 Recross-examination:

Our association was active at that time in that matter. (2473.) The Valley Association quit activity partly because of depressed conditions, and then we have the West Coast Association which represents the whole Northwest, and we felt that there was a duplication of orginization work, but because of a condition that had no bearing on this case, and I don't care to mention, we felt it was to our advantage to revive the Valley Association. The cross-State line had nothing to do with it at all. It is a matter of selling and grading, where the Willamette Valley was interested and where the West Coast could not well take part with it, and it was to our advantage to revive the Valley Association without duplicating a lot of the work that is carried on by the West Coast. That had no bearing on the cross-State case at all; it was merely a coincidence. (2474.)

Thereupon Thirtieth Annual Report of Union Pacific Railroad Company, year ended December 31, 1926, was marked "Complainant's Exhibit No. 39."

The Thirty-First Annual Report of Union Pacific Railroad Company, year ended December 31, 1927, was marked "Complainant's Exhibit 40."

Forty-Third Annual Report of the Southern Pacific Lines and Affiliated Companies, year ended December 31, 1926, was marked "Complainant's Exhibit No. 41." (2483.)

Forty-Fourth Annual Report of the Southern Pacific Lines and Affiliated Companies, year ended December 31, 1927, was marked "Complainant's Exhibit No. 42."

Thirty-Eighth Report of the Great Northern Railway Company, year ended December 31, 1926, was marked "Complainant's Exhibit No. 43."

1330 Thirty-Ninth Report of the Great Northern Railway Company, year ended December 31, 1927, was marked "Complainant's Exhibit No. 44."

The report for the Northern Pacific Railway Company for year ended December 31, 1926, was marked "Complainant's Exhibit No. 45."

Report of Northern Pacific Railway Company for year ended December 31st, 1927, was marked "Complainant's Exhibit No. 46." (2484.)

Thereupon the petition of the Salem, Oregon, Chamber of Commerce, so offered, was marked filed and granted at hearing without objection, August 16th. (2485.)

The statement entitled "Statement of the Summaries of Assessment Rolls of the Several Counties of the State of Oregon for Year 1927 as Equalized by the County Boards of Equalization" so offered and received, was thereupon marked "Defendants' Exhibit No. 47."

Thereupon the map previously marked for identification "Defendants' Exhibit No. 3, Witness Mullen," was received in evidence. (2488.)

1331 R. E. SHINN was thereupon produced as a witness on behalf of defendants, and, being duly sworn, testified as follows:

Direct examination:

My name is R. E. Shinn. I am employed at the present time by the United States National Bank of Salem and act in the capacity of agriculturalist or agricultural agent for that institution and I give part of my time to that work; and I am also operating a farm of some 400 acres in Polk County, which has no connection with the business of the bank; it is operated separately. I graduated from Oregon Agricultural College in 1914. After having entered the institution for one year I operated and managed a farm in the Columbia Basin, Hood River County, and during summer vacations was employed in that area, and also in the Willamette Valley. It was orchard property that I operated in Hood River County. (2490.) After graduating I leased for approximately a year and a half and operated in a diversified way a farm in Polk County, Oregon, near Salem, and there raised prunes, apples, hogs, and in the dairy business in a limited way. I left this ranch to take over the management of an orchard and poultry property near Mosier, Wasco County, Oregon. This consisted of about 275 acres, 200 of which were in orchard, consisting largely of apples, pears, and some prunes; and also operated quite an extensive poultry plant there; we had on the average of about 1,500 hens. I continued that operation there as his manager for about five years, except the short time I was in the service in the World War. Left this employment to assume the management of an orchard and farm property in Marion County some 7 miles southwest of Salem; it was about a 300-acre place, about 200 acres of which were prunes and English walnuts, prunes being fillers interplanted in the walnuts. In connection with this orchard operation there we produced other kinds of agricultural products, such as hay and feed for working stock, poultry, and some cows and so forth. After about four years of operation at this place I

1332 accepted the district management of the Co-operative Packing Shipping Association of Medford, Oregon, and was (2491)

engaged in the packing and shipping of pears and apples from the Rogue River district. At the end of the year, at the reorganization of this association, at that time they employed a national distributing company by the name of The Denny Company, with its head offices in Chicago, as sales agents and distributors of the products which they had handled. I continued in their employ for about three years. In the employ of The Denny Company. During that time we were engaged in the packing and shipping of fruits and vegetables in the Rogue River district in Oregon, also from the Umpqua district of Douglas County, of which Roseburg is the center, and from the Sacramento Valley and tributary districts of California.

The products handled during that time consisted of pears, apples, prunes, broccoli, peaches, and berries in Oregon, and with my associate in business there from California we shipped grapes, lettuce, onions, celery, peaches, and apples. These shipments both from Oregon and California, were chiefly for eastern destinations. (2492.) This employment with The Denny Company terminated in 1927, and since that time, starting February 1st of this year, I have been employed, as originally mentioned, with the United States National Bank of Salem, Oregon.

1332½ Q. Now, your attention is called to a letter of date July 31st, from W. L. Powers, addressed to you under that date, regarding the Silver Lake project and Summer Lake project in eastern Oregon, and this letter is in the record. The examiner requested you to produce a copy of the letter that inspired this answer. I hand you a letter bearing date July 25, 1928, addressed to Dr. W. L. Powers, Oregon Agricultural College, Corvallis, Oregon, signed "Robert E. Shinn." Is that the letter to which the previous letter referred to is an answer?

A. Yes, sir; said letter of July 25, 1928, reads as follows:

"I am interested to know the outcome of the very recent (2493) soil survey of the soil conditions in that territory adjacent to Silver and Summer Lakes in Lake County, Oregon.

"I was informed at the State engineer's office that you were making such a survey at the present time of lands subject to irrigation. It was stated that there was a question as to whether the land in question could be used economically for agricultural purposes due to excessive alkali or other deterring factors.

"If such information is available at present I would appreciate having it.

"Thanking you for many past favors,

"Respectfully,

"ROBERT E. SHINN."

I have been through the report of Mr. Teutsch, mentioned in his Exhibit 1, regarding the counties in western Oregon from an agricultural standpoint. Discussing them in my own way:

Lake County, according to the agricultural census of 1925,
1333 had in cultivation and in crop 134,110 acres, and had what is called plowable pasture lands—in other words, lands that are cleared and could be handled as pasture or can be planted to grain or any cultivated crops—in addition, 35,000 acres. (2494.)

The principal crops produced consist of wheat, oats, barley, potatoes, and hay. There are in the county some considerable apple and pear orchards. The conditions, I will state here, of the production of these fruits are not favorable from the standpoint of commercial enterprise in competition with the fruit belts of eastern Oregon, eastern Washington, southern Idaho, and northern California. It does, however, sustain a considerable acreage of prune trees, the products from which are in the main evaporated and canned and then shipped to eastern and foreign markets.

Grain and hay produced are to a large extent consumed locally.

Total number of dairy cows in the county in 1925 was about 13,000 head, beef cattle about 95,000, swine 11,500, sheep 40,000, goats 17,500.

The county produces quite extensively small fruits, nuts, and vegetables.

Substantial co-operative package plants have been successfully operated in Eugene for a number of years. At this packing plant the fruits and vegetables are prepared for shipment in various ways, canned, and some dried.

In order to show the relation there between the production of hay in the county and the number of dairy cows, the county had in that year 13,000 dairy cows and produced 58,300 tons of hay. (2495.)

Linn County: Cultivated lands there amount to 177,766 acres, with 70,436 acres of plowable pasture.

Products produced in Linn County are substantially the same as in Lane. Lane exceeds it in the production commercially of fruits, nuts, and vegetables. Linn County exceeds Lane in production of dairy products.

1334 As in the case of Lane County, grain and forage is largely consumed locally.

Linn County ranks third as a dairy county in western Oregon from the standpoint of number of head of dairy cattle, being exceeded only by Washington and Clackamas Counties.

In 1925, the agricultural census of Oregon shows Washington County having the largest number of dairy cows, 15,133, Clackamas County next with 14,322, Linn County third with 13,977.

It ranks second in production of sheep in western Oregon, being exceeded only by Douglas County.

Now to show the co-relation between dairy cows and hay in that county, it has 13,977 dairy cows and produces 66,000 tons of hay annually.

Benton County's cultivated lands comprise 62,962 acres of cultivated land, plowable pasture 30,197 acres.

Line, Lane, and Linn Counties, the products consist largely of wheat, oats, barley, potatoes, and hay, and also has some considerable commercial prune orchards. But in the line of (2496) agricultural enterprise Benton County is primarily dairying and the raising of sheep. In none of these enumerated products does it rank with either Lane or Linn County in volume.

It has 5,600 dairy cows, and produces 28,600 tons of hay annually.

Lincoln County: Out of a total acreage of 645,000 acres, Lincoln County contains only 10,700 acres of cultivated land, and approximately 5,400 acres of plowable pasture. It is a rough, mountainous timbered county. To the limited extent that it produces, its crops are substantially the same as the counties previously mentioned here, but the yield in wheat and barley is almost negligible, and oats is very small. It has 4,480 dairy cows, and produces 12,400 tons of hay annually.

Exam. ROGERS. What was the source of this data?

A. The source of all this data on counties is taken from
1335 the Agricultural Census Report of 1925.

Josephine County: This county has an area in excess of a million acres, with a total acreage in cultivation of 23,400 acres, plowable pasture of 4,222 acres. It produces a small quantity of wheat, oats, barley, potatoes, and some considerable hay. It has 2,300 dairy cows, 2,000 sheep, 2,000 swine. It has commercial orchards in apples, pears and prunes. (2497.)

Its limited agricultural area is due to the fact that it is quite a mountainous county, and the tillable lands are confined practically to small tracts that lie adjacent to the various streams in the county. Irrigation is required for the production of most of its crops, of which alfalfa is he most important, consisting of about 4,000 acres. Fruit, made up largely of apples and pears, comprise its largest commercial production. It has 2,328 dairy cows, and produces 9,350 tons of hay annually.

Douglas County is comprised of more than three million acres, of which 8,300 is in cultivation, 43,400 acres in plowable pasture.

Its agricultural production is of the same nature as Lane and Linn Counties, and the volume of grain, potatoes, and hay is comparatively small. It is the largest prune-producing county in western Oregon, and it has the largest number of sheep of any of the western Oregon counties.

The principal agricultural resource is the Umpqua Valley, where some 400 to 450 cars of broccoli are produced and shipped, mostly for eastern markets. Its greatest commercial resource consists of its production of fruit and nuts. It has 5,573 dairy cows, and produces annually some 37,700 tons of hay. (2498.)

I produced broccoli in Douglas County in the year 1926 to 1927.

Broccoli in that area is produced very largely on what is termed there locally as river bottom soils. In other words, tributary to
1336 the small streams that flow into the Umpqua, and the Umpqua itself, there are alluvial soils there that have been built up,

quite rich, due to the over-flow of these rivers, tributaries to the Umpqua, settled there and made quite a rich bed of soil. Now, this type of soil is the type that has been and is now being used for the production of broccoli. Occasionally, on some years, they have attempted to enlarge its area by going up on the hillsides, on the higher benches (2499), and attempting to produce broccoli on those areas and under those conditions, but that has been practically given up as a failure due to this fact: This broccoli matures in the winter time, along in February, and runs into March, and in order to bring it off at that time this broccoli has to be planted in the month of June, and as late sometimes as early in July. Now, they have practically no irrigation there for any of that broccoli, and certainly not on any of these bench lands or on the hillsides.

This broccoli is set out as a small plant; about, oh, say, six inches high, and is transplanted from beds. Well, it is hard to give this broccoli a start in the first place. They use machines down there with a tank on them, and they are driven by a team of horses down the row, and a couple of men sit in the back, and this machine is so made up mechanically that it draws a—makes a rill and drops about a pint or quart of water every so often, and the man sitting behind sticks the plant down in this water that is left in the rill. The machine covers it up and lets it go. The point is, from that time until maturity of this broccoli, it gets no moisture except that conserved from the winter supply of the winter before, and while growers felt that after seasons when the prices were high that they could go upon the hillsides and higher bench lands to produce this broccoli, they found it was impossible, because they couldn't obtain the moisture there to (2500) mature those crops, at least on a very large scale, so that I would say, in answering your question, that the areas there that are suitable for expansion of that industry
1337 are confined to those alluvial bottom-soils tributary to these streams in the county.

As to the one big year mentioned here, the production of broccoli ran up to in the neighborhood of a thousand cars that year, taking the district as a whole.

There were some bench lands employed in that production, but to what extent I am not sure, but they were producing broccoli on the bench lands that year, and the following year—one reason for that large production that year was not only the amount planted, but they had very good moisture conditions, and as a result the broccoli came through in very good shape with, I would say, better than the average production per acre. The following year this company, which I might say I was connected with here in the production of broccoli, had about the largest (2501) planting in the area—I think we had over a hundred acres in one block there of broccoli and we had a contract there for two years to produce that broccoli—and the next year following was just the opposite kind of a season that the season on which the heavy production was shipped. In other words, they had a heavy season in the spring, and the rains stopped very

early and it was very dry. As a matter of fact, the seed beds, many of them, dried out before they could even get the plans out of those beds to transplant on the acreage. The result was there was a shortage of plants, and even on the bottom lands that year a large percentage, I would say, of the acreage that was set out, the plants wilted and died for lack of moisture. Now, that was due to the dry season. And, as I remember, the production the following year was cut, and that high tonnage of near a thousand cars was reduced the following year to around 230 cars, if I remember correctly.

Now, I wouldn't leave the impression that that was entirely due to the drouth, but it was very largely due to that. There was a decrease in planting that year, because this heavy production
1338 the year previous had been what we term it as a "red-ink year"—there was nothing in it for the grower, due to too large a surplus, and that heavy production in Douglas County coming in contact with a very production in the Guadalupe section of California, and Colma section, in those districts south of San Francisco which are heavy producers. (2502.) There was just too much broccoli on the market and the grower didn't realize anything for his crop. That was partially responsible for the decrease the following year, as well as the drouth period. That was in 1927. There is a chance for confusion there, because this acreage runs over from one season to the next. In other words, it is planted one year and harvested the next. The harvest year was 1927.

As to whether it is a crop that we can depend upon for any s[ta]ble tonnage—or what tonnage we could depend upon from the broccoli production there in Douglas County—I would say an average, under existing conditions, it would average somewhere around 300 cars, perhaps 250 or 300 cars. There are other factors that are limiting factors there, and you may get a heavy production one year and a very light the next. I have mentioned the condition of drouth there. The year before this, I believe it was, 1925, we had a very heavy freeze and reduced the acreage around Roseburg very materially. I think as high as 75 per cent of the acreage was killed out there, and most of the broccoli that was produced that year was produced further south, around Myrtle Creek and Riddle. (2503.)

As far as my experience was concerned there, we had no trouble in marketing our broccoli because of lack of railroad facilities, or if we desired to use the Portland gateway and the Columbia River route, to expedite those shipments to Chicago. I would think that my experience was that of the ordinary producer down there.

Exam. ROGERS. Did this move under icing?

A. Yes, sir.

1339 Exam. ROGERS. Is it perishable?

A. Yes, sir.

Exam. ROGERS. Do you know on what basis the icing charges were assessed?

A. In a general way, yes. The icing of vegetables and broccoli is a little different than fruit. In other words, they ice the bunkers

and generally salt it, and then after the crates are placed in the car they are also top-iced; in other words, the ice is broken up in small chunks and placed on top, so that as the ice melts it drips down over the broccoli and keeps it fresh.

Exam. ROGERS. What do they do about re-icing? (2504.)

A. They are re-iced at regular icing stations, as far as the bunkers are concerned, but I don't believe that there is any more top ice added in transit.

Exam. ROGERS. Is it carried on the stated charges or cost for icing?

It is carried there on stated charges, so far as the icing in bunkers is concerned, and it is optional with the shipper as regards the amount of top ice he cares to use, up to certain limits. There is a limit.

We shipped from western Oregon into the Chicago market. I would say that it isn't a matter of a race between California districts and the Oregon district as to which car is going to get there first, because its shipping season extends over a considerable period, and it is more a question of a car, you might say, shipped out of Roseburg arriving on the Chicago market on a day when there wasn't heavy shipments coming out of California. (2505.) You might by cutting the time short a day arrive there when there was considerable excess of broccoli on the market from the California districts, whereas if it had been a day later it might reach there even under better conditions. That refers simply to the marketing conditions. As far as transportion is concerned, the important primary consideration is the delivery of it in good condition.

1340 Exam. ROGERS. Does that depend somewhat upon arrival of the traffic?

A. Referring to which?

Q. Condition on arrival?

A. I would say yes.

I have finished my statement on Douglas County, except for the statement of dairy cows and production of hay, which is approximately 5,573 dairy cows and some 37,700 tons of hay annually. (2507.)

Jackson County has an area of 1,788,000 acres, of which 93,600 is cultivated; 13,250 acres are in plowable pasture. I do not know how much of Jackson County is in Federal ownership.

Jackson County differs in many respects from the other counties of western Oregon, with the possible exception of Josephine County. One of the chief differences relating to agricultural production is the fact that they produce agriculturally largely under irrigation. Its largest production is in fruit, consisting of apples and pears, which they pick, pack, and ship in what might be termed a large commercial way.

The production of wheat, oats, barley, and potatoes is limited and required in the main for its own consumption.

It has 5,450 dairy cows, and some 26,300 feed cattle, 24,000 sheep and goats, raises 73,500 tons of hay annually.

Coos County has an area of 1,042,000 acres, of which 21,000 acres is tillable land, and 10,675 acres are plowable pasture. It produces wheat, oats, and barley to a very small extent; has 10,370 dairy cows, produces 29,200 tons of hay annually. (2507.) It is also credited with 5,000 beef cattle and 6,000 sheep. To the limited extent it is developed to agriculture it is primarily and essentially a dairy operation. Cultivated lands are intensely rich and productive.
1341 Its main resource is timber and manufactured lumber. Extensive logging operations conducted in the county require the operation of several logging camps.

Curry County has an area of 1,023,000 acres; 7,615 acres in cultivated land, 6,811 acres in plowable pasture.

Due to its natural contours and make-up, this country can never be an important agricultural county, and to the limited extent that it is engaged in agriculture is largely devoted to dairying.

Comr. McMANAMY. Are your comments taken from the census report, or are they your own view?

A. In regard to the future for agriculture?

Comr. McMANAMY. Yes.

A. Largely my own views.

Comr. McMANAMY. Are they based upon investigations which you have made?

A. Yes. It is credited with 3,000 dairy cows and produces some 7,300 tons of hay annually. (2508.)

The more productive counties of the State lie to the north of Lane County. In this classification Marion, Polk, Yamhill, Washington, and Clackamas are outstanding. I should have said western Oregon instead of the State, as that is the district which I am discussing here.

According to the 1926 crop and livestock estimates published by the United States Bureau of Agriculture, in 1926 western Oregon had at that time a total of 162,155 dairy cows. Of this number, the 9 counties mentioned and discussed, that is, that I originally discussed and itemized, had a total of 66,610 head, and the other 9 counties had the balance.

These agricultural counties in western Oregon, taken as a whole, produce agricultural products in excess of their own immediate needs, and these products are of the same class as produced
1342 in southern Idaho and eastern Oregon, except that they do not produce for market beef cattle in any such volume as they do in the eastern Oregon section and southern Idaho.

To the extent that western Oregon and the Willamette Valley produces excessively in these agricultural products it competes with eastern Oregon and southern Idaho in the California markets and in its own local markets.

The suggestion has been made of the necessity of shipping alfalfa hay for consumption of the dairy herds into western (2509) Oregon.

In my opinion such procedure is fundamentally unsound and impractical. While the leguminous seeds are necessary as a component in the ration of dairy cows, they are produced in abundance in western Oregon, and particularly in the Willamette Valley.

The amount of hay shipped in is very limited, and should be. For many years vetch and clover have been produced in western Oregon, and particularly in the Willamette Valley, in excessive quantities, and within recent years an extensive acreage has been successfully developed to the raising of alfalfa without irrigation, particularly in Benton, Clackamas, Clatsop, Columbia, Coos, Linn, Yamhill, Washington, Lane, Douglas, Polk, Multnomah, and Marion Counties.

There are large areas of soil types in these counties peculiarly adapted to the raising of alfalfa, and the increase of same can be accomplished as rapidly as demand requires or justifies. As a matter of fact, there are over 11,000 acres in alfalfa now in western Oregon counties all of which are raised without irrigation, compared with only 3,000 acres in 1925. This is an increase of from 3,000 to 11,000 in a little over two years—three years.

To this 11,000 acres should be added 26,000 acres in production in Jackson County, and 4,000 acres in Josephine County,
1343 making a total acreage at the present time in alfalfa in western Oregon counties of 41,265 acres. (2510.)

A survey conducted by the Oregon Experiment Station at Corvallis for the season of 1925–26 reports an average yield of alfalfa in these western Oregon counties as 3.7 tons to the acre in the nonirrigated Willamette Valley counties, and the cost of production of this hay per ton shall be $9.11. That is in the stack, or harvested. This cost includes every element entering into production, including interest on the land and taxes.

To compete with western Oregon alfalfa, the grower of eastern Oregon must bale his hay at an average cost of $3.00 a ton, haul it to shipping point, and pay the freight into destination on the haul of from three to four hundred miles and I am told the freight rate is 29½ cents per 100 pounds for 350 miles haul, or $5.90 per ton.

With the success of alfalfa on nonirrigated lands in western Oregon now established, it is impossible, in my estimation, for eastern Washington or eastern Oregon growers to enter this market in a competitive way with alfalfa hay.

In this connection, I would state that from soil analysis, that have been made from western Oregon counties it has been conclusively determined that there are available and admirably adapted for the growing of alfalfa in excess of 335,000 acres.

Alfalfa hay produced in western Oregon is for sale at the present time. I will mention here an experience of my own in the past two or three weeks in connection with a farm which (2511) I operate, that I was offered alfalfa hay, baled of good quality, at $14.00 a ton, and this same farmer told me that a man from Coos County had offered him $16.00 a ton for his hay after examining it, but he

wanted the man to store the hay in his barn there for two months before shipment; but, at any rate, this Coos County buyer was satisfied with the quality of the hay.

1344 To show the co-relation between hay production and requirements of hay in western Oregon, I have summarized a table here showing the estimated requirements of hay for total number of horses, mules, sheep, dairy and beef cattle in western Oregon in 1926, and I find the requirements to be in the neighborhood of 810,000 tons.

The total production for that year, quoting the same authority as already have been in these figures and compilations, was 854,005 tons, leaving an excess of hay for 1926 of approximately 45,000 tons. Now, this was computed in the following manner. I might state here that I have gone further than what in my opinion is actually fed to this stock. I have taken in all cases, with one exception, the amount that has been advocated and advised by the college and experiment station as the amount that should be fed to cattle and horses and sheep under the best conditions.

For instance, I have allowed for horses and mules 5 tons. (2512.) As a matter of fact, they are not fed that much, because they are pastured a good part of the time, and this is figured on the basis of stock that is very largely fed in the stall. Taking 69,295 head of horses and mules, at 5 tons, would give you 346,475 tons.

I have allowed for all the dairy cows of western Oregon the amount of 2.3 tons per head, and I have taken that figure because a survey carried on, economic survey carried on by the college over a period of three years figuring the costs of production of dairy products of western Oregon has shown that the amount fed—and I believe that they figured, that they compiled these figures on something like 160 to 170 dairy herds in western Oregon, where the products were produced under the average conditions, in other

1345 words, from small dairies to large dairies, and trying to get at the figures from the standpoint of actual conditions rather than theoretical conditions, and they arrived at that figure, 2.3 tons per head. Now, figuring on that basis gives us 375,256 tons.

There is a small amount of beef cattle produced in western Oregon, with the exception that perhaps Jackson County has more than the average counties in the other districts, and it is rather difficult to tell just how much hay is fed to this beef stock, because they are not raised under a beef cattle country conditions. You might say they are (2513) mostly ranged in the hills, they pick up most of their feed from pasture lands, and in southern Oregon they are fed more hay than they are in the Willamette Valley and coast counties, but I have allowed one ton per head; 71,130 beef cattle at a ton would 71,130 tons.

The figures on sheep in western Oregon in 1926 showed that we had 402,160 head. These sheep, as a matter of practical fact, are fed very little hay. Due to our moist, warm climatic conditions in the winter time, these sheep are fed almost entirely on pasture. Oc-

casionally you will find a man who feeds them a little hay in the winter time. We don't have any snow to cover the ground like they do in eastern Oregon that keeps the cattle away from ground feed, so that they always have access to it, but the college has stated that if this stock should be fed 50 pounds, on the average, of hay, that is, ewes during the winter, that they probably would bring the ewes through in better condition and perhaps affect the quality of wool advantageously, and so I have allowed 50 pounds of hay for sheep in western Oregon, and, figuring on that basis, 402,160 head of sheep at 50 pounds a head would give 12,554 tons.

Comr. McMANAMY. Is the 50 pounds per head the amount that you figure would bring the sheep through in best condition? (2514.)

1346 A. Those are the figures that have been compiled by the college, and if you ask me my personal opinion I would say that it was ample. Those figures—the total of those figures gives a total of 805,415 tons.

In regard to this hay production and the feeding of livestock generally, to get at the possibilities of sound agricultural practice, I have made this note:

No ranch or dairy farm is well conducted that does not produce a maximum of production for its own operation and consumption. Cow, beef, steer, hog, sheep, and poultry are produced and marketed to the end that the products of the ranch may be realized upon to the best advantage, and, in addition to that, the fertility and productive capacity of the farm being maintained and improved as against the exhaustion of the soil, from the standpoint of producing grain and hay, and so forth, and shipping it out of the country, instead of putting it through the livestock and keeping the fertility on the land to increase production per acre. Of course, there are districts where this method of management is impractical. I have in mind the wheat belts of eastern Oregon or eastern Washington, where wheat is produced in very large acreage, large farms, but when it comes to a practical proposition of an 80-acre irrigated farm or an 80-acre farm in western Oregon, unless such a policy and such a type of management is followed the land is gradually depleted until it reaches the basis where it might be termed as marginal acreage, or it doesn't produce enough per acre to pay for the man's labor and his investment. (2515.)

This system of feeding the crops produced on the ranch and marketed in that way through livestock on these smaller types of farms—and when I say smaller types I mean from 40 up to 160 acres—

1347 has been consistently urged by the extension service of the agricultural college, and the necessity of that type of management is recognized and realized by the best class of farmers in the Willamette Valley in western Oregon.

Regarding this hay situation, the shipment of hay into western Oregon has been steadily decreasing for several years, and I would refer to a report and bulletin of the agricultural college, a report

of an economic conference held in Umatilla relative to the Umatilla project, irrigation project there, discussed under date of February, 1926. Quoting from the economic bulletin with respect to the shipment of hay into western Oregon, they state:

"This situation is due to the enormous increase of vetch, clover, and alfalfa hay in western Oregon. In 1925 the 19 western Oregon counties had 393,433 acres of hay. In 1920 there were 327,841 acres. There has been no such corresponding increase in dairy cows, and the increase is almost entirely in clover and vetch, which compete with alfalfa. To this statement might be added the fact that during the past two years alfalfa has come to be a substantial and dependable hay crop in several of the (2516) western Oregon counties stated above. The increased clover and other leguminous crops has also made it unnecessary to ship in alfalfa from eastern Oregon as in the past." Decrease in shipments of western Oregon hay during recent years is shown by the receipts at Portland for the years as follows:

1918–19 there was shipped into Portland 3,263 carloads. In 1920–21 there were 2,317 carloads. In 1921–22 there were 2,098 carloads. In 1922–23 there were 2,684 carloads. In 1923–24 there were 2,196; and 1924–25, 2,134; or a decrease during the period between 1918–19 and 1924–25, a decrease of from 3,263 cars to 2,134 cars.

These figures just given were compiled from the record of inspection of carloads at Portland during that period as reported in the Exchange Service Bulletin above referred to. Of these carloads, a considerable portion of this hay is delivered at north
1348 Portland, and is fed to the stock there, handled by the Portland Union Stockyards Company's yards, where they feed the stock that comes in and has to lay over perhaps a night, or before they are sold there in the yards, and this company handles all the live stock that goes on the market there coming into Portland from outside counties. These shipments were from eastern Oregon (2517); from irrigation districts in which the Umatilla project is interested, either from the standpoint of its own production or from competitive areas that have had hay produced within the project. I have no figures on what came into Portland from western Oregon.

Attention is also called to the further fact that since 1923 there has been an actual shrinkage in the number of dairy cows in western Oregon counties. In 1923 the total, which included matured dairy cows and heifers—this is heifers two years old and older—was 222,000, while in 1927 there was 210,620, as reported by the United States Department of Agriculture, Bureau of Economics report.

I would say the shipment of grain into western Oregon—and when I say that I mean exclusive of the Port of Portland, where grain is reshipped, but shipped into western Oregon for consumption in western Oregon—hasn't obtained in the past (2518), and I can see no way in which it can be anticipated in the future, with the possible exception of a limited amount of eastern corn, and I think the

amount of that will decrease rather than increase. There are several reasons why. In the first place, we can produce good hard corn grown in western Oregon, and there is a factor and an element that enters in there which is rather obscure to the average layman, but it is very important from this standpoint, that diversified farming, or any type of farming in the Willamette Valley which pertains to livestock or dairying must be organized from the standpoint of a rotation of crops in order to carry out a permanent system of
1349 agriculture, in order to keep up and improve the fertility of the land. That system has got to be worked our over a period of three to five years, and the rotation must be worked out so as to give all the land one year out of three or five, depending upon the type and system with which the rotation is worked out, during one year out of that period in cultivated crops, it must give one year in production of clover, alfalfa, and vetch, and leguminous crops of that nature; and then the third year it is turned over to the crops of that nature; and then the third year it is turned over to the production of various cereal grains, ordinarily. (2510.) The fact that one year out of three on a three-year rotation has to be adapted, turned over to the cultivation of cultivated crops, puts the farmer in this position where he has a pretty small, narrow margin to figure what he is going to raise as a cultivated crop, and from a standpoint of an annual crop over the lands that are adapted to dairying and general farming he has practically two alternatives; he has to raise corn or he has to raise potatoes, and it is impracticable entirely to figure that all of the lands in the Willamette Valley, in western Oregon, one year out of three, would be raising potatoes, because you would have enough potatoes there to supply the United States, almost, or a very large area, at any rate, so it is almost a proposition of producing corn.

They produce corn here in western Oregon for ensilage, and men will produce it for feed, but a relatively small acreage will produce a very heavy tonnage of ensilage, so that a farmer is in a position where he is forced on the balance of the acreage over and above what he wants to feed in grain feed and ensilage, into the production of hard grain and corn. This line of argument refers
1350 to the proper type of farming, and all of our farmers don't farm that way, but I will say this, that they are increasing their efficiency, they are following those methods every year, and the college experiment stations are continually (2520) through their country agents hammering on that thing to try to get those farmers to produce more cultivated crops to produce more corn, and I am going to—I would like to state here, to show you their attitude in this matter. (2521.)

There was a bulletin issued by the Oregon Agricultural College, No. 367, under the direction of Mr. Paul V. Maris, who is the director of extension service at the college. Quoting from that bulletin is this statement:

"Corn is principally used for silage purposes, but the warm areas in the Snake and Columbia River Valleys and the Rogue and Umpqua River Valleys, as well as the warm soils in the Willamette Valley, produce good corn for grain. The acreage should be increased by twenty to thirty-five thousand acres to do away with eastern shipments."

That is the attitude of the college on that matter.

Now, as far as what we are actually doing, I have here a copy of statistics on production of corn as shown in the agricultural census of 1925, and in that report it shows that the year previous to the year in which this bulletin was issued, that every county in western Oregon, with the exception of two, Tillamook and Clatsop Counties, produced corn for grain, and the total production in bushels of this hard corn for grain were 428,459 bushels, and went as high in some counties as 95, between 95 and 96 thousand bushels. This is not a large volume of grain, but it does show that these counties are capable of producing this type of grain, and following the line of argument that I mentioned before, they are going to produce more.

1351 Now if I can take up my line of reason here from where we left off on corn. (2522.) I had mentioned the production of wheat. The total yield of wheat in 1925 was participated in by every county in western Oregon except Tillamook, and amounted in the aggregate to 3,741,000 bushels. In 1926 the same counties produced 4,404,790 bushels. The average yield per acre in 1925 was about 21 bushels to the acre. In 1926 the average yield is practically the same—a trifle over 20 and under 21 bushels per acre. The total yield in eastern Oregon was contributed to to a greater or less extent by all of the 18 eastern Oregon counties, and amounted in 1925 to 10,450,000 bushels, while in 1926 it amounted to 14,948,000 bushels.

Comment has been made previously upon the yields in Malheur and Harney Counties, but according to the United States Bureau of Agricultural Economics report these counties are not, nor have they been, large producers of wheat.

In the year 1920 Malheur County produced 145,813 bushels from 5,960 acres, or about 24 bushels to the acre, while Harney County produced 10,519 bushels from 1,159 acres, or a fraction better than 9 bushels to the acre.

In 1925 Malheur County produced 140,671 bushels from 4,936 acres, or 28 bushels and a little over to the acre, while in the same year Harney County produced 7,584 bushels from 991 acres, or an average of 7.6 bushels to the acre. (2523.)

In 1926 Malheur County produced 185,700 bushels from 6,775 acres, while Harney County produced 12,600 bushels from 1,800 acres, or an average of 7 bushels to the acre.

In 1927 Harney County raised 200 acres of winter wheat, with a total production of 3,400 bushels—I might say that winter wheat

that is produced in Harney and Malheur Counties is the dry land wheat, and I have been told by Mr. Kent, who heads this
1352 department of agricultural statistics, that the spring wheat was all produced on irrigated land in those districts. The total production in 1927 in respect to this winter wheat was 17 bushels to the acre. There was 1,800 acres of spring wheat with a total of 27,000 bushels or an average of 15 bushels to the acre. That is in Harney County.

With respect to these figures, I would like to call attention to page 5 on Exhibit 1. The present tonnage of wheat that is designated as available at the present time for shipment from Harney County into western Oregon amounts to 1,530 tons. The figures shown by the United States Department of Agriculture, Department of Crops and Livestock estimates, cooperating with the Oregon Agricultural College extension service in their recent publication of statistics for the year 1927, made this statement:

"Oregon's 1927 wheat crop was the largest on record, with one exception, the 1923 crop, which was only 25,000 bushels larger." (2524.)

This publication on statistics for eastern Oregon counties shows the total production of both winter and spring wheat in Harney County for the last year as 912 tons, or 618 tons less than the total tonnage stated in Exhibit 1 as being available for immediate shipment.

I attribute this difference to the fact that instead of using the figures as given by the Department of Agriculture and the Oregon Agricultural College extension service as the actual production, that the witness in that case has used as a basis for the tonnage of grain produced in that section an amount that was raised at one time on the Warm Springs project and the eastern Oregon branch experiment station.

Calling attention to this fact in correlation with those state-
1353 ments as given by this same division of crop and livestock estimates of Harney County, they show 855 dairy cows and 3,240 hogs.

Exam. ROGERS. Your figure for wheat there, Mr. Shinn, is from the entire county?

A. Yes.

Exam. ROGERS. Is there any of that county's production of wheat tributary to the Burns branch?

A. I think there is, but I am not positive as to the location of that wheat. (2525.)

These dairy cows and hogs are going to have to have some concentrates over in that county, and this Exhibit 1 is calling for the shipment out of that county, immediate shipment, of more wheat than they raised over there last year, and still they have nothing retained for concentrates for the hogs and dairy cows. Take in the case of wheat production of Malheur County; as to what they have given

for dairy cows and hogs there, this same census report shows 855 dairy cows and 3,240 hogs.

Q. Have they retained any feed, or seed, either, out of that 800 tons?

A. Well, as I pointed out, their exhibit calls for shipment of several hundred tons more than they actually produced.

In the case of wheat production in Malheur County, which is on page 1 of Exhibit 5, the statement is made there is now available for shipment into western Oregon 9,400 tons of wheat. The United States Division of Crop and Livestock estimates give the total production of wheat for last year in Malheur County to be 4,920 tons, including all spring wheat and all winter wheat. The exhibit shows available shipments for western Oregon 4,480 tons more than was actually produced in Malheur County last year; and Malheur County, as stated here in (2526) the first part, last year for eastern Oregon was the highest production per acre they have had with one exception.

1354 I again call your attention to the fact that last year Malheur County had 4,645 dairy cows and 8,925 hogs. Doubtless this stock is fed a large amount of alfalfa hay, but they also have to have concentrates to finish them off, in the case of hogs, and to maintain their milk flow on an economic basis.

Oats are raised more extensively in western Oregon than in the eastern Oregon counties. The total acreage for the year 1926 in the western Oregon counties is 264,525 with a production of 7,611,500 bushels, or an average of 29 bushels to the acre. This does not include Klamath County. Every county contributed to this yield except Tillamook County. The total production of oats in the eastern Oregon counties for the same year was only 1,204,500 bushels, raised on 39,475 acres, with an average yield of 30 bushels to the acre.

The barley production in western Oregon counties during the same year amounted to 527,200 bushels from 18,400 acres, or a yield of 29 bushels to the acre.

The eastern Oregon counties produced in barley during the same year 1,759,000 bushels from 63,000 acres, or an average of 27 bushels to the acre. (2527.)

With respect to this grain that is produced in western Oregon, I have given statistics here on wheat and oats, and some figures previously on corn, but the figures, taking the average year's production, will total approximately 13,000,000 bushels, made up of wheat, oats, barley, shell corn and rye in the 18 western Oregon counties.

In regard to poultry feed, the western Oregon farmer, as a rule, produces his own chicken feed. There is a difference in the poultry business in western Oregon. A large part of the

1355 poultry is produced as farm flocks on the diversified farm, or on the fruit farm, which make up a large part of the poultry which forage for a large part of their feed, are turned on to the stubble after harvest and are maintained in large part from what

they pick up around the buildings, and so forth. Then there is the other class that are strictly commercial producers, keep their flocks penned up, and, from the standpoint of districts, a large part of those poultrymen are adjacent and very close to Portland; that is, I would say within twenty to thirty miles radius.

The feeds that are used by these commercial poultrymen, grains, and so forth, are very largely drawn from Portland, due to this fact: That these grains are mixed in order to give what you might call a balanced ration of scratch feed (2528) to chickens, and this feed is prepared and mixed by some half a dozen or more large mills and feed houses located in Portland, and what grain is handled commercially is to a very large extent disseminated from the Portland point to these various poultrymen over the State.

I made inquiry in regard to the ideas of these feed men as to about what proportion, and one man told me he thought that ninety per cent of the poultry feed that was used in western Oregon originated from these various mills that mixed this feed here in Portland.

These feed men obtain their grain from eastern Oregon, eastern Washington, and even from the Willamette Valley and western Oregon, except what corn they use, which comes in from the East. And it is the actual fact that grain is shipped out of the Willamette Valley into Portland, graded there, and certain qualities are used to mix up the poultry feed and ship it back to the Willamette Valley for poultrymen to use in their flocks.

1356 With regard to livestock from Malheur and Harney Counties, all of the carload shipments destined into Portland are received at the yards of the Portland Union Livestock Company. The records of this company show that during the year of 1927 the total shipments from all stations in Malheur County, cattle, calves, hogs and sheep, amounted to 169 carloads, and during the same period the total shipments from Harney County amounted to 145 carloads. (2529.)

With respect to tonnage estimates from western Oregon towns, Exhibit No. 1, tonnage tabulated for the proposed cross-State railroad from western Oregon counties, includes in same a considerable number of carloads of pears from Lane, Douglas, Linn and Benton Counties.

The fact is that the pears grown in all western Oregon counties north of Josephine are primarily of the Bartlett variety and are canned before shipment. The pears from the counties named are not adapted for shipment to eastern markets as green fruit, with the possible exception of a very few isolated instances in Benton and Douglas counties, where a small volume of later winter varieties are raised and shipped.

Josephine and Jackson Counties are, of course, producers of pears in variety and quality acceptable in eastern markets, and are shipped to eastern destinations; and one factor in that, and the chief factor, is the climatic conditions. That is, different climatic conditions as compared with the other districts of western Oregon.

But of the pears produced in Jackson County nearly one-half are of the Bartlett variety, and of this fifty per cent approximately one-half of them are sold to canneries in western Oregon, where they are canned and disposed of as canned fruit. (2530.) I would
1357 assume, therefore, that the pear production in these western Oregon counties are duplicated. The same is included in the Exhibit No. 1 for the several counties north as canned fruit and vegetables.

The same comment could be made in a general way with respect to the estimate in Exhibit No. 1 on the shipment of apples from Lane, Douglas, Linn, and Benton Counties. These counties are not adapted for the production of the quality of apple that will stand up and compete with apple-growing districts such as Hood River, Yakima and Wenatchee, eastern Oregon and southern Idaho, and extensive orchards planted years ago have been, to a considerable extent, neglected and cut down.

It is true that a considerable volume of the apples grown in these counties are canned, and to the extent this is done production is included, as was the case with pears, in the estimate on canned fruits and vegetables.

Apples are shipped from Jackson County. Some of these shipments of apples find their market at the port of Portland and San Francisco as the point of embarkation for export to foreign countries; and Los Angeles is used and looked to for quite a considerable tonnage of the apples out of the Rogue River Valley.

Comr. McMANAMY. Will these apples stand exporting?

A. From Jackson County? (2531.)

Comr. McMANAMY. Yes.

A. Yes, sir.

I would say the apples from other western Oregon counties would not stand exporting. There is a considerable difference in the life of the apples produced in western Oregon and in the districts mentioned. To draw a specific example, you might take one of the leading varieties produced in Hood River, which is the Spitzenberg. There was a time when we thought we could grow Spitzenberg apples in the Willamette Valley and compete with Hood
1358 River in like quality, but as a matter of fact the Hood River Spitzenberg will mature in prime condition, crisp, fine shape, for Christmas market in the East, whereas the Willamette Valley Spitzenberg, which—well, you set them up together and an ordinary person would not be sure they were the same variety, except for the shape—mature, that is the Willamette Valley Spitzenberg matures about Thanksgiving time, and it is not a keeper, and can't compete in any way with Spitzenbergs produced in Hood River or Winesaps produced in Wenatchee, and those who originally went in the apple business here ten or fifteen years ago have very largely gone out, have been forced out through lack of competitive qualities.

Exam. ROGERS. What difference does it make whether they mature at Thanksgiving or Christmas? (2532.)

A. It makes a difference from this standpoint: That the Christmas market is a big market for those kind of apples, and I simply mentioned that to show that they haven't got the storage quality; they haven't got the quality to hold up. It is very desirable from the standpoint of apple production and marketing to have a range of time over which the marketing agent may use his discretion as to the amount to put on the market at a given time and the time to put that product on the market. Now, if you have got a product that is going to stand up for a short length of time, and a short length of time only, it just cuts down his margin of operation that much narrower, and if conditions of glutted markets are such that it would pay to hold that product a little longer his hands are tied in regard to perishable products that have a short life. He has got to throw them on the market and take his chances.

Exam. ROGERS. How much difference in the keeping quality, in point of time, would you expect between the Willamette Valley and the Hood River apple?

A. Well, I would say three months. In other words, while
1359 the Hood River Spitzenberg that I mentioned is to be put on the market at Christmas time, I did not mean to say that was the limit of storage conditions for that apple. They can be held over a considerable time longer than that.

Comr. MCMANAMY. What do you mean by a considerable time, thirty days, sixty days, or ninety days? (2533.)

A. I would say sixty days later than Christmas.

Comr. MCMANAMY. And would the same be true with respect to the Willamette Valley Spitzenberg?

A. No; I would say that the limit of life of the Willamette Valley Spitzenberg would be Thanksgiving time. As a matter of fact, there are practically no Spitzenbergs being shipped out of western Oregon any more, anyway.

Comr. MCMANAMY. Is that true of the Rogue and Umpqua River Valleys?

A. Well, it is very largely true of those districts also. The production of apples in the Rogue River Valley is practically all Newtowns. I don't suppose from the Rogue River Valley there is over half a dozen cars shipped in any one season of Spitzenbergs any more. And they raise a few Spitzenbergs around Roseburg, but they are very highly perishable; in fact, they don't hold up any better than the Willamette Valley apples.

Now I just mentioned the Spitzenbergs there. There are other varieties of apples in the Willamette Valley that hold up longer than Thanksgiving. They raise some Newtowns in the Willamette Valley that will hold up longer, but, taking the thing from the viewpoint of an industry and as a whole, the apple business from a commercial standpoint has practically been given up in western Oregon, with the exception of the small area down there in Jackson County. (2534.)

Exam. ROGERS. To what extent was it regarded as practical before it was given up?

1360 There was a time about 1910 when there were extensive acreages planted in western Oregon, and they have practically all been a failure, I would say, with one exception. There is now at Monroe, Oregon, quite a large apple orchard still operated, and operated scientifically and under good conditions. Outside of that—I think that has about 400 acres, and outside of that one orchard I don't think there is another large commercial apple orchard being operated successfully in western Oregon, in the Willamette Valley.

Exam. ROGERS. Is there any good reason why there should not be other acreage for apple production operated in the same scientific way as that orchard?

A. I would answer that in this way: That the handicaps are so great that it is unprofitable.

Exam. ROGERS. What do you mean by handicaps?

A. Well, one of the handicaps is this: It is a condition relative to the climate. Here in western Oregon we have a moist growing condition. There is a disease that affects deciduous fruits, and particularly apples, known as fungus or apple scab, and it is practically impossible to control it here in western Oregon on apples. It is a black blotch that appears on the side of the apple and the apple becomes deformed and (2535) very often cracks open across this blotch and it requires a spray to combat it. It is a caustic spray, and when it is applied in the summer time it has to be very carefully handled; if not it scalds the fruit and makes the skin of the apple checked and spoils its appearance and throws it in a low grade.

Then we have another disease that is called anthracnose that is even a worse proposition. It thrives under the moist conditions that we have here, and it is a disease that attacks not only the fruit but the tree itself and causes large canker on the bark and will eventually kill the tree if not checked.

1361 The serious part of it is with regard to the fruit itself. It is a fungus disease and attacks the fruit in the spore form. This spore matures and ripens just previous to the harvest time of the apple, and these spores float through the air and get on the surface of the apple, and you can't tell there is any infection there at the time the fruit is picked, but after the fruit is picked and packed in the box it starts a soft rot around where that spore has reached the skin of the fruit, and it means not only a breakdown of that particular specimen in the box but it spreads to other specimens, and you may easily lose the box as a whole.

Exam. ROGERS. Are not other apple sections afflicted in the same way?

A. Southern Oregon has practically no scab at all. (2536.) Hood River on some seasons has a little, but the reason for it is the fact that they don't have the moist late spring conditions that we have here in western Oregon. They have more of an arid climate. Both

of them are irrigated districts; they depend on irrigation for their moisture supply.

I could enumerate several other reasons, but the main reason is the quality of the fruit itself. You stand up fruit produced in Wenatchee, Yakima, and Hood River, and you put up the apples that are produced here in western Oregon, and the main commercial varieties don't look like the same apple at all, an entirely different apple, and won't stand up in long storage.

With respect to the green prune situation in Lane and Douglas Counties, I would say this: It is generally accepted with the prune-growing sections of western Oregon that prunes produced here will not stand successful shipment to distant markets in the Middle and Eastern States.

There are a number of reasons that make the shipment of
1362 these prunes in a green state impossible. First, there is extensive production of green prunes in Walla Walla County, Washington, and in the Milton and Freewater district in Oregon, and southern Idaho, that produce an excellent quality of prune, and they ship it successfully to the eastern market. These prunes are a different texture of prune, thicker skinned, and have actually received more favorable comment in markets than the western Oregon prune. (2537.)

Furthermore, these prunes enter a market at a time when it is called upon to absorb a large volume of pears, apples, plums, apricots, and similar fruits.

The western Oregon prune is, then, second, susceptible to a fungus commonly called "brown rot," which develops under the moist conditions that necessarily obtain in the shipment for long distances in refrigerator cars under ice. There have been instances, and the same will recur, where a producer will speculate on the possibility of disposing of them green where the market at home for a dried product is overburdened, but, as a practical proposition, the prune grower is not in the business in western Oregon to ship his product in green condition. While the production of prunes in western Oregon is substantial, it must be dried for shipment or marketed in the canned state.

Comr. McMANAMY. Have the western Oregon prunes any advantage over the Idaho prunes?

A. From the standpoint of shipment green, no.

Comr. McMANAMY. I was referring to the quality of the prune.

A. No; they have not. I would like to explain to you, though, in this matter of shipment of fruit, quality is not always the limiting factor; it is not the most vital factor. We are a long way from the market here, and with all these varieties (2538) of fruits we have got to have a variety and a product that is going to hold up in firm condition under long transit, under ice and under cold storage
1363 conditions east, with respect to some varieties, and we may produce a variety of fruit here, or a kind of fruit, that is of excellent quality for immediate use; you could put it on the market

here in Portland, or go out and eat it out of the orchard, that would be much better than the quality of the fruit that we ship east, but if you would put that same variety or kind of fruit in an ice car and ship it out it would break down before it got out of Idaho. It would not stand the shipment. So that really one of the most important factors is in the shipping quality of the fruit and the attractive appearance of that fruit after it arrives in the market.

Comr. McManamy. Then if it breaks down before it gets out of Oregon, or Idaho, that completely prohibits its shipment to eastern markets?

A. Yes, sir; now I don't want that misconstrued to say that these prunes break down before they get out of Oregon, because I didn't mean to infer that, but just to bring out my point that the quality is not the main thing in our shipments. It is the quality with respect to shipping conditions, holding up, and correlated with that a dry, attractive appearance after it reaches the market. (2539.)

Exam. Rogers. I would like to ask you here, Mr. Shinn, since we have interrupted you, what is your association with the bank down at Salem?

A. My association there is twofold. In the first place, our agricultural department there is supposed to give service to the client farmers of the bank. In other words, the bank is interested in seeing its farmer clients succeed in their own enterprises; and not only that, it is not limited to the bank's clients; they offer their agricultural service to all the farmers of the community, and my work is largely field work, visiting these farmers at their request on their own farms, assisting them in working out their production and marketing problems.

1364 From the other standpoint, I am used by the bank in assisting the bank itself in determining the advisability of making certain loans to farmers who request these loans, and if there is a question in the minds of the officials as to whether the loan is justified I am sent out to check upon the farmers' operations and report as to the advisability of the amount.

Exam. Rogers. How did you come to be associated with this case?

A. I was associated in this case at the request of the railroad, the O.-W. R. & N., for my services as an agriculturist to check upon the agricultural conditions as they affected (2540) this case, statistics and other standards, simply as a professional service. And I would say here that the bank has no connection with this; it is simply a matter——

Exam. Rogers. Did the O.-W. R. & N. tell you what their position was going to be in the case?

A. I can't remember that they did, but of course I knew their position as the case went on.

Exam. Rogers. Well, did you know it before the hearing?

A. Yes; you mean before the hearing started here in this room?

Exam. Rogers. Yes.

A. Yes, sir; mention was made in the Exhibit 1 as regards the shipment of sheep into California from Malheur and Harney Counties, and Lake County and other eastern Oregon counties. Eastern Oregon and southern Idaho lambs have not moved in large volume to the Pacific coast markets. San Francisco Bay markets have an extensive producing area for their mutton and lamb requirements. The sheep industry is a very important one in central and northern California. Nevada is also a very large producer. In western Oregon the industry is important and is growing in a substan-

1365 tial way year by year, but the lamb raised in eastern Oregon and southern Idaho is grown under entirely different conditions than the western Oregon lamb. The climate of the former is rigorous and develops a much hardier lamb and he will stand shipment well to Chicago and other eastern markets, whereas the western Oregon lamb is (2541) raised in small flocks, in a mild climate, and will not stand the long shipment east, and he has not been shipped east and will not be.

There is, however, a market in Portland and San Francisco Bay Points, and, to some extent, to Los Angeles, for these western Oregon and Washington sheep and lambs.

The growth in the sheep industry in western Oregon has been as follows: In 1920 western Oregon had 289,700 sheep; in 1927 she had 405,000, or an increase in seven years of 70 per cent.

In California in 1922 statistics show 2,475,000, and in 1927, 3,392,000, or an increase of 72 per cent in five years.

There is no basis upon which to estimate with any degree of accuracy the production of hogs in this western country year by year. The fact is that when the price of corn is low in the producing areas of the Mississippi and Missouri River Valleys, the corn is fed in greater increased volume to hogs and the increased production induces shipments to the coast. This condition in the price of corn influences very effectively the production of hogs in this western country.

On the other hand, when the price of corn is high, the Idaho, Oregon, and Washington farmer will increase his hog production and will be a much more important factor in supplying our own western markets. (2542.)

The fact is, however, that hogs are shipped during every year from the Middle and Central States to the Pacific Coast States, and the Pacific Coast States have not and do not produce sufficient quantities of hogs for their own requirements.

This concludes the statement I prepared.

1366 On page 10 of the exhibit by Mr. Teutsch, Exhibit 1, it calls for the shipment of 1,916 tons, or 150 carloads of cream from northern Lake County on this cross-State line. I would think that the logical thing to do, if they went into the dairy business over there, would be to have a creamery and concentrate the products rather than to haul bulky product like cream over into

western Oregon to manufacture it into butter. I assume that would be sour cream. I can't imagine a sweet cream market for 127 cars that that would reach. As to whether that would find market in western Oregon, or go to Portland or San Francisco (2543): The situation with regard to the dairy business in Oregon at the present time is that we are producing all the dairy products we use here and shipping an excess out of the State, and that excess at the present time is almost entirely, at least very largely marketed in California markets, San Francisco Bay markets and Los Angeles, so that an increased production on that side of the mountains there would naturally find a market in California.

While I was discussing the grain production in western Oregon, I summarized the entire grain production as being a total of thirteen million and some excess. I didn't attempt to get exact figures on that figure, for this reason: Corn, for instance, is not tabulated in the Government reports annually. It is only tabulated every five years. There has been no extensive survey made of agriculture by the Department of Agriculture in the last five years, by the Department of Commerce, so I had to go back five years to get that figure on corn. The other figures were taken for last year's production—1926.

Exam. ROGERS. I didn't understand whether you differed with Mr. Teutsch on this cream from northern Lake County or not. (2544.) A. I am hardly in a position to differ with him, because I can't see what his idea was. I can't see why they would be shipping cream out of northern Lake County in a bulky form.

1367 There has been no increase in the planting of apples in western Oregon for a period of, I would say, approximately ten years, at least eight years, from a commercial standpoint. Of course, there are always a few trees going out for home orchards. There have been no new apple orchards put in Jackson or Josephine County; the reverse is true. In Jackson County they have been eradicating their apple orchards on a rather large scale, because they considered that their margin of profit was so much greater on the pears than the apples that they could not afford to keep the apples in there and continually be running behind with them.

(Thereupon, at 12.30 p. m., a recess was taken until 1.30 p. m., Thursday, August 16, 1928.) (2545.)

After recess

R. E. SHINN resumed the witness stand and further testified as follows:

Cross-examination:

My experience, since I graduated from Oregon Agricultural College, has been principally in horticulture, the growing and managing of orchards, fruit ranches, and the marketing of those products.

In my judgment conditions are not favorable in Lane County for the growing of apples and pears for rail shipment. I believe to some

extent apples and pears have been moved by rail to various eastern markets out of Lane and other Willamette Valley counties.

There is some apple production around Newberg. There is one large orchard tract there known, I believe, as the Newberg orchard. That orchard I know something of the history of. It has been on the market and has actually changed hands in trades several times in the last ten years, and is on the market for sale now, I believe. (2546.) Newberg is in Washington County. I am fairly certain that apples have been shipped by rail from the Newberg section.

1368 Q. What has been the condition since you graduated from O. A. C. in 1914 in the apple-growing industry of Oregon and the extent to which you have observed it in Washington? And I suppose you have, because you mentioned Yakima and Wenatchee a good many times this morning in your testimony.

A. Yes, sir.

Q. I mean when I say the condition in the apple-growing industry, have the growers in Wenatchee, Yakima, Hood River, and the Rogue River Valley, as you have observed those conditions in those years, been able to market their apples at satisfactory prices so as to maintain themselves in that period of time and conduct their business successfully from a financial standpoint?

A. Well, in answering that question I could not fairly answer it by putting all of those districts in the same class. (2547.)

In order to answer that question intelligently by districts you have got to go into the economic side of the apple production in the Northwest. The profit realized, if any, by the producers of apples is governed largely by two factors; one, and perhaps the most important, is the tonnage per car; the other is the collective tonnage placed on the market of the country or the world, including foreign markets, as affects the individual producer's tonnage per acre.

Now what I am trying to get at is this: Every producer of apples, or any other agricultural commodity, has a fixed overhead, more or less. It varies somewhat. In other words, his interest on investment, his taxes, his cost of irrigation, his cost of plowing, his cost of harrowing, and so forth, is a fixed charge, whether that man produces 100 packed boxes to the acre of 500; and if, due to natural causes, which include climatic conditions, soil types, and so forth, which influence the production and the quality, he is in an area, in a district, which gives him the maximum tonnage per acre of

1369 the highest quality fruit, his margin of profit is going to be greater than the man who is on a marginal acreage, who is unable, due to physical conditions over which he has no power, such as climatic conditions and soil conditions and the lack (2548) of sufficient moisture, water, under which with his best management, or anybody's best management, he is only able to produce a minimum or average tonnage per acre.

To get at our districts, Wenatchee and Yakima are the heaviest producing districts, from the standpoint of tonnage per acre, in the

Northwest, and they are producing from orchards up there around 400 to 500 packed boxes per acre to, in some instances, as high as 800, and it has been known up to a thousand packed boxes of apples per acre; whereas in Hood River, for instance, their average production per acre is much less, and in southern Oregon their average production per acre is much less.

But you take all of those districts, when it comes to a fixed overhead they have a smaller production of the unit basis, the packed box, to absorb that overhead than in a district where they are producing maximum tonnage.

As a result, consequently on a given market, which all of them have to serve, the man who is producing the maximum tonnage per acre is going to show a wider margin of profit at the end of the season than the man who is producing average tonnage per acre.

Q. I had asked you what the economic conditions have been in the industry since you have graduated from the agricultural college, in connection with the production of apples, so far as the operations in these various districts being financially successful and resulting, generally speaking, in satisfactory profits to the growers. What has been the history in the last fourteen years in that respect? (2549.)

A. I would say that in the Wenatchee and Yakima districts
1370 they have had a narrow margin of profit. I would say that in Oregon, with respect to the Hood River district, that they have had a negligible margin of profit. I would say in southern Oregon that they have had a negligible margin of profit. And I would say in the Willamette Valley it had been a total failure.

It is an absolute fact that in the Hood River and Mosier sections in Oregon, and in the Rogue River Valley in Oregon, there have been, in the past ten years, a great many very fine orchards abandoned and apple growers have gone broke in both of those districts.

Q. Now is the condition in that respect any different in the Willamette Valley than it is in those Hood River and Rogue River Valley producing districts, so far as the apple growing is concerned?

A. Well, if a man goes broke in one district, why, you might say, he can't go much "broker" in another.

It is true generally speaking, here in the Northwest in the last ten or fifteen years, but particularly in the last ten years, there has been little, if any, profit in the apple growing business, and in all of the apple growing sections of the Pacific northwest a great many orchards have been abandoned and many of the apple growers have gone broke. (2550.)

The broccoli of Douglas County compares with broccoli produced in California. Broccoli in California is produced along the coast regions, practically entirely, and it is produced in competition with Douglas County in those districts which lie adjacent to and south of the Bay district. It is produced all the way from Colma on down; as far as the limit is concerned, they produce it around Los Angeles. However the type that is produced around

Los Angeles does not compete with the north, in that it is a different variety. It is really what is known as cauliflower instead
1371 of broccoli and goes on the market before. The limit of territory which competes with the Oregon product would be about Watsonville and Salinas. (2551.) Some of the California broccoli in the territory around Watsonville and Salinas is irrigated and some of it is not. It is grown right down, you might say, to the tidewater. There are large acreages right up to the seashore there, and it is grown inland for a distance of, oh, some twenty miles. I would say that the soil moisture conditions in California where broccoli is grown are much more favorable than they are in the broccoli growing sections of Douglas County; especially in the heavy producing sections around Guadaloupe and Salinas and Watsonville. They are right down there next to the ocean, with a very low elevation, and their moisture conditions are much better, not from irrigation, but from natural soil moisture.

When I was engaged in the broccoli business in Douglas County we made some carload shipments. In some instances we routed them and in some instances we left the routing up to the Southern Pacific. (2552.) When we routed shipments east we sort of split the routing; we shipped part of them by the Portland gateway and part of them by Roseville. We figured it was about an equal break in time to market from either direction. And supplementing my statement there, to follow that, in regard to leaving the routing to the Southern Pacific, we were shipping out of some small siding points and the car had to be picked up by manifest trains. With their manifest trains, sometimes after we would get the cars loaded and billed, the next manifest train would be going south and perhaps it would be several hours before a manifest train would be going north. In that case, as I say, we left it up to the Southern Pacific, and in each case they attached the car to the first manifest train out, regardless of which direction it was going. The shipments that we did route we divided pretty fairly between the Portland gate-
1372 way and the Roseville gateway, I would say if there was any difference, more of them went by way of Portland than the south. With us it was about an equal break in the time taken in transit to Chicago. If anything the Portland gateway gave a little better time, but not much difference. If I remember, it took from ten to twelve days, on an average, for a car of broccoli from Douglas County to get to Chicago, either way it was routed. That all moved in refrigerator cars, which moved east in fast fruit trains after they reached Roseville.

Comr. McManamy. Did you follow the plan of top icing?

A. Yes, sir.

Comr. McManamy. How many tons of ice did you put on top of the load, do you know?

A. I believe it was approximately seven thousand pounds.

Q. While you were engaged in broccoli business in Douglas County and shipping to eastern markets, did you have any claim for loss and damage?

A. Yes, sir.

Q. How were those claims, or how was the damage occasioned? Was it a deterioration of the product? (2554.)

A. Well, frankly, I am not able to answer your question intelligently, for this reason: That this broccoli was shipped account of Denny & Company, of Chicago. Denny & Company, of Chicago, had their own claim department located at their home office, and as these shipments arrived in Chicago if there were any damages claimed they were taken care of from that end and not from our end of the line. Now if—I am trying to get your meaning—if I get what you are driving at there, it is a question of whether the claims were due to breaking down in transit, or——

Q. Well, I wanted to know whether the claims were due to a wrecked or derailed car, or rough handling, or deterioration of the product en route.

1373 A. Well, there never was any complaint, I mean a general complaint, as to the condition on arrival. There may have been individual cars in which there were but as a general thing not.

In my judgment as a broccoli shipper, a saving of two and a half or three days in time of transit of a car of broccoli to Chicago from Douglas County would be of importance to the shipper; it would mean that the product would get to destination in better condition which, ordinarily, would mean that it would command a better price in the market. (2555.)

Exam. ROGERS. How long did you say it took for broccoli to get from Douglas County to Chicago?

A. As I remember, it was from ten to twelve days, and I think we figures fourteen days on eastern seaboard all over.

Comr. MCMANAMY. Do you know whether your top icing would last that length of time?

A. To Chicago, yes; whether it would beyond that I don't know.

Comr. MCNANAMY. You have no records of that?

A. No; I have no personal knowledge of that.

We made no experiments along the line of shipping broccoli in oiled sacks sealed to prevent deterioration. That may have been done, but I have never heard of it.

The original figures I gave of the acreages of tillable land for the different counties were as shown in the 1925 census as actually being planted and growing crops on them, and the plowable pasture was land that was suitable for production of crops but were not in crops during that year. (2556.)

I have been in every western Oregon county, I believe, but when it comes to eastern Oregon counties, there are several I have not been in. I have been through Malheur County on the train, not to make an investigation. I have not been in Harney County. I drove

through Lake County several years ago in a car on The Dalles-
1374 California Highway. (2557.) I have not been in Grant or Crook County; I have been in Deschutes County and down to Bend.

Q. Have you been anywhere except to Bend in Crook County, in getting there, and on the highway going down The Dalles-California Highway?

A. Well, I have been out on some of those roads. I stopped in Bend and drove out in through there, just from the standpoint of interest to look at the country, but it was on a trip through there.

Curry County is the only western Oregon county west of the Cascades in which I have not been. (2558.) I have not been in Baker County except to go through on the train; I have not been in Wheeler County.

Exam. ROGERS. Mr. Shinn, at what points in Douglas County do they load broccoli?

A. They load broccoli in Douglas County at Roseburg, at Dillard, Myrtle Creek, and one other small town—Riddle. There are other sidings between those points at which they load also.

Exam. ROGERS. Those points are south of Roseburg?

A. Yes, sir.

Q. Mr. Shinn, have you ever been in Lake County except as you said traveling on The Dalles-California Highway?

A. That is all.

Q. Well, that highway does not run through any portion of Lake County, so it must have been in Klamath County you had reference to.

A. Possibly I was mistaken. I am not very familiar with that country. (2559.)

Any information or testimony I gave with respect to production, or conditions in any of these counties in which I have not visited was not taken entirely from the 1925 agricultural census
1375 report. My interest in data which I accumulated there led me to make personal inquiry from a number of sources, of people who knew the country, had been in it, and who are recognized as authorities in agriculture in those districts. As far as any statistics which I gave, they were all derived from actual printed reports which are gotten out by the Federal Crop and Livestock Bureau, co-operating with the Oregon Agricultural College extension service. And I may have quoted some from 1925 census, which I believe included the Department of Commerce, Federal Department of Commerce 1920 census of the United States as a whole.

Q. Did you visit any of the western Oregon counties or talk with producers or shippers in any of the western Oregon counties, to obtain information to put before the commission here in this hearing? (2560.)

A. I did, yes; but in most cases I have not given that information as yet.

Exam. ROGERS. You have given all the information you are going to give, haven't you?

A. Unless I am cross questioned to bring it out.

I haven't anything yet to testify to on direct, of the information that I obtained from these statistical sources and from the visits I made in some of the western Oregon counties; that is, if I am asked no more questions I have given all the testimony I came here to give. I went into Coos County in western Oregon to make an investigation for the purpose of obtaining information to present at this hearing. (2561.) I went in no other counties for the express purpose of getting information, other than counties where I have been since I was investigating data relative to this case. Since I was employed to obtain information I went to Corvallis, Benton County and interrogated at some length the faculty down there on certain points, and I made investigations in some points in Multnomah County.

1376 The same is true in Marion County and Polk County, and some of these other counties which I naturally worked into. (2562.)

I consulted with the faculty of Oregon Agricultural College at Corvallis, but I did not consult with Mr. W. L. Teutsch prior to the hearing, or talk with him at all. I have just met the gentleman here in this room for the first time. I made these investigations to testify here at the request and in the employ of the Oregon-Washington Railroad & Navigation Company. I am employed at the United States Bank of Salem for just one-half of my time; the other half is left to my own enterprises.

I spoke of a shrinkage since 1923 of the dairy cows in western Oregon, and I would give the following reason for that. (2563.)

I think we have got a pretty good class of dairy farmers in western Oregon. That is borne out—that opinion is borne out by the fact that while there has been an actual shrinkage in the number of dairy cows, there has been a considerable increase in dairy products. Now, the situation in regard to the market in beef has been a wonderful opportunity for the dairyman in western Oregon, and he has held on for years here to the low producing cows, generally called "boarders," because through natural tendencies he hated to give the cow up as long as it was giving milk. Many dairy farmers don't keep accounts, they don't know whether a cow is exactly on one side of the border of profit or the other, but when beef went up to the point where they could sell a nine or ten-year-old dairy cow that was producing a hundred pounds a year of butter fat for $60.00, they are turning them off pretty fast, and if you will go out to the north Portland yards you will still see trucks driving up and turning off the nine or ten-year-old dairy cows pretty rapidly. (2564.)

There is another factor. I have shown this one largely as the

1377 reason for increased production with a smaller number of head. On the other hand, for several years here California has been absolutely combing the western Oregon territory for cows to take into California, and while they haven't gotten all the best cows they have taken out some good cows along with the average, and

that has certainly been a factor in the decrease in the number of head in western Oregon. But, with this shrinkage in the number of dairy cows in western Oregon since 1923, there hasn't been a corresponding shrinkage in production of dairy products. I prophesy an increase, rather than a decrease, in the number of dairy cows in western Oregon; I believe that there will also be an increase in butter, butterfat, and cheese, dairy products in that territory in the future. (2565.)

I did not say that grain consumption in western Oregon was decreasing—in my opinion it is increasing. The production of grain in western Oregon is adequate to supply the demand for grain in that section.

Q. Is it in respect of corn?

A. Well, in order to answer that question intelligently, there is no fixed demand for corn.

Q. Has it been in the past?

A. As far as the farmer goes, and as a feeder is concerned, I would say very little. Now, I would like to explain that answer. The feeding of livestock isn't a question primarily of feeding a certain type of grain. It is a question of feeding the livestock in balanced ration with the right ratio between proteins and carbohydrates as fed to that animal. That ration can be made up in, I would say, a hundred different ways, and so long as the particular animal being fed is fed that proper ratio of carbohydrates and proteins in a form which is palatable, in a form which that animal desires and will take readily, it doesn't make much difference whether it is corn, wheat, barley, or what it is; but the
1378 factor is and the point is getting these carbohydrates and proteins in proper relation into those animals at the least expense to the feeder. If he can (2566) ship corn in here from the Middle West to feed to this stock at a price to give him this ratio that he desires to get the best results cheaper than he can produce wheat or corn or oats on his own land, naturally there is going to be a market in the valley for that corn.

There have been some imports of corn from Middle Western States into western Oregon—I wouldn't say substantial—but I tried to make this point plain this morning: There is one crop, perhaps one of very, very few instances where the cost of that article is not the contributing factor entirely, and I would say even in a small extent it will grow more so in the future, for the reason that I stated this morning—that it is absolutely imperative to the Willamette Valley farmer to produce a cultivated crop in his rotation, and that crop is logically corn, and whether that production of that corn is costing him more money than he would have to pay for it from the East or not isn't the vital issue; he has got to produce that crop, and the corn is his best crop, and he is going to produce it whether it will cost him more than to ship it from the East or not. (2567.)

I don't know whether there have been substantial imports of corn from the Argentine Republic into all the Pacific Coast States, Portland, and shipped down into the Willamette Valley, or not. I have never heard of it, but if there is any there surely ought to be a duty on it to keep it out.

It was not my idea to give the impression by my testimony that the industry of agriculture and dairying apparently is going back in western Oregon—absolutely the opposite—it is going forward through a reduction of the "boarder" cow, eliminating it from the herds, and the improving of those herds from breeding from
1379 high-type animals, high-producing animals. I would say production and consumption both were increasing, and in my judgment would continue to increase, in the Willamette Valley—in western Oregon counties generally.

You misunderstood my point in regard to the statement that there were enough potatoes in the Willamette Valley to supply the United States, almost. I was making the statement that it was necessary in the plan of rotation of crops to produce a cultivated crop in order to get the best results from the land for other crops. (2568.) Now the western Oregon farmer has a choice of two crops, as far as from a practical standpoint is concerned and market conditions—one is potatoes, and the other is corn—and my point was that if he eliminated the corn and produced all of this land one year out of three in potatoes there would be far in excess of the needs of the Pacific coast potatoes produced in the Willamette Valley in Oregon. I would not advocate that he did that. As a matter of fact, last year there was a large surplus of potatoes produced on the Pacific coast, at a loss for the farmer, and, according to the Government outlook reports on agriculture, there will be another large surplus of potatoes produced on the Pacific coast this year, with another loss for the farmer. Of course, if there is a large surplus of potatoes in Oregon, that means unless they are just simply allowed to rot that that exportable surplus will have to move to the principal markets—that is in an easterly direction—and they have got a surplus in the east as well this year, resolving itself into a loss and economic waste of potatoes this year. (2569.)

Q. Is it your idea that, agriculturally and horticulturally, each county and section in this State, so far as possible, should be self-sufficient, so that the rail movement of products in and out between different sections of the State, so far as possible, should be dispensed with? You mentioned—the reason I am asking that question
1380 is this—I want to leave to Mr. Ellis the question of alfalfa hay, but to illustrate my question I want to mention that—you spoke about the unwisdom and undesirability of thinking of moving alfalfa hay from Malheur County across the State into western Oregon. Now, that is what I had in mind in asking that question. Is it your judgment that economically each section of the State, so far as possible, should be agriculturally and horticul-

turally self-sufficient, so—that is, as far as possible—so as to avoid the rail transportation of products or raw materials in and out?

A. I think that every district will be on a sounder agricultural economic basis if it produces all of its agricultural requirements, but not necessarily does that have anything to do with transportation whatsoever. (2570.)

I did not have in mind that rail transportation might be deemed more or less superfluous for the purposes of a free movement and interchange of agricultural and horticultural products. Livestocks, and the production of leguminous crops, which are all hay and seed crops, are the foundation of permanent agriculture, and the more that line is adhered to by the individual farmer the heavier his production per acre will be, and we get back to the same question that you brought up on the apple proposition, whether he is a dairy farmer or what he is, if he is producing a maximum tonnage of his crop per acre his margin of profit is going to be wider, and the way to bring about that end is by feeding the crops that he raises to his livestock and putting the manure back on the land and raising the leguminous crops, which have the faculty of introducing free nitrogen from the air into the soil itself.

Apples are shipped out of Portland in refrigerated steamers that go to the United Kingdom and various other countries. (2571.) There have been some shipments of apples moved in the past from Jackson County to Portland and thence shipped by refrigerated steamers to various countries in export commerce; and it is
1381 possible that some have from the Willamette Valley, but the Willamette Valley is so inconsequential from the standpoint of commercial apple production that it wouldn't make much difference one way or the other.

I have heard of Denny & Company and Dan Weille at Hood River. As far as Denny & Company are concerned, they didn't follow the practice of assembling and buying apples from over Oregon and Washington and into Idaho and shipping them to Portland to export them to their companies on refrigerated steamers. (2572.) As regards Dan Weille & Company, I don't know what their routings are.

I am familiar with the apple growing section of southern Idaho, around Fruitland, and southwestern Idaho in a limited way. These apples, as compared with those produced in the Williamette Valley, north of Jackson and Josephine Counties, are generally considered of a higher quality as regards desirability for export or rail shipment.

Exam. ROGERS. How do they compare with these Jackson County apples?

A. Well, the Jackson County apple—when I say Jackson County, I refer to the Newtown, because practically all the Jackson County apples are of the Newtown variety, and they are a high quality apple. There are very few Newtowns produced in Idaho; a little hard to

draw a comparison. The Idaho apples, the chief variety over there is the Jonathan, an apple that matures early in the season and is off of the market, practically, before the Newtown goes on, although they produce some Winesaps and Arkansas Blacks over there, and some others, but the Jonathan is the chief variety. (2573.)

Immediately after graduating from the agricultural college I leased a farm in Polk County on which we had about forty acres of apples. This was not a success. It was a miserable failure, due to the undesirable quality of the apples and adverse market conditions. The market conditions, generally speaking for
1382 the last ten years or more, for all the apple sections of the northwest, have been considered by the producer as adverse. There have been years when they made a small margin of profit Last year was an example of this.

Q. I wish you would turn to Exhibit 1, page 15. You called attention to Mr. Teutsch's estimates of apples and pears, fifteen cars of (2574) apples and twenty-one cars of pears, and then you called attention also to the item of canned fruits and vegetables—116 cars. Then you said that the pears of Lane County and in the western Oregon counties north of Jackson and Josephine were of the Bartlett variety and not suited for rail shipment but used for canning, and that you assumed that there was a duplication, therefore, in the case of the estimated apple and pear tonnage in the figures for canned fruits. Do you mean by that that Mr. Teutsch estimated 21 cars of shipments of pears from Lane County and then included in the 116 cars of estimated canned fruits the same pears that were included in the 21 cars under the heading of pears?

A. My statement in that respect, as I remember, referred to Jackson County. (2575.)

Q. Oh, no indeed, I think that it referred to all of the counties, and Lane in particular, all of the western Oregon counties north of Josephine and Jackson Counties, and I wanted to know if you wanted to give the impression by your testimony that you were suggesting that Mr. Teutsch had duplicated tonnage here by first putting in pears, 21 cars, and then including in his estimate of 116 cars of canned fruit enough canned pears to take care of that 21 cars—in other words, to duplicate that pear tonnage twice, once in the raw fruit form, and once in the canned form?

A. As I remember my statement, and at any rate I would wish to be understood, that that situation existed with respect to
1383 Jackson County, and this tonnage here of apples and pears shipped out of Lane County is so small that I wouldn't care to say that it was duplicated. I would say that there was a possibility that there was some duplication of apple or pear or any fresh fruit shipments with canned fruits from some of the counties in western Oregon north of Jackson or Josephine, due to this cause. (2576.) In his exhibit on Jackson County, on page 22, he has shown 3038 cars of pears as moving to eastern markets out of Jackson County, and the average shipment of pears out of that county is

approximately 3,000 cars—I have been told that the maximum shipment was 3,100 cars in past years. The reason that I think that this figure of 3,038 cars is wrong is that I know that in past years approximately half of the Bartlett tonnage has gone to the canneries in western Oregon, and I know through past experience and operation in that valley that half of all the pears produced in that county are Bartletts—that is half the pears in Jackson County are Bartletts—(2577.)

The last time I was in Jackson County was in 1927, at which time I investigated the production of different varieties of pears in the county and the approximate number of carloads shipped as part of my business. I have said that the average shipment of pears out of Jackson County was 3,000 cars a year to all points—if I remember correctly, the testimony was given here yesterday that last year it was less than 3,000. I said that half of the production of pears in Jackson County was Bartletts and that approximately half of the Bartletts went to the canneries in western Oregon—that would be twenty-five per cent of the total tonnage. (2578.)

The Bartlett pears produced in Jackson County move by rail in largest quantities to Salem. Salem is the largest canning center in western Oregon. They have there some half dozen large canneries.

Two of them are owned by large California packing corpora-
1384 tion, and they get perhaps the bulk of the tonnage. Other points that get Bartlett pears from the Rogue River Valley in southern Oregon are Hillsboro, at which Ray Maling has his cannery, and Corvallis, of which Mr. Hutchinson is the manager, and Eugene has shipped pears in from southern Oregon and canned in their cooperative plant. I have sold them to them. From a commercial standpoint I would not say that there was an appreciable or a substantial production of pears in most of the western Oregon counties north of Jackson and Josephine.

I said this morning that the pears produced in the western Oregon counties, like Lane and Douglas and Benton and Linn, and others, were of the Bartlett variety, and were those that went to supply the local canneries. I don't see that that contradicts my other statement, however. (2579.) In addition to all of the pears produced locally in these western Oregon counties they go into Jackson County and take approximately half the Bartlett pear production of that county to meet their requirements. The Bartlett varieties produced half of the pears that were grown in Jackson County and the canneries get half of that, or 25 per cent. The other half of the Bartlett tonnage goes for eastern shipment.

Half of the Bartlett production of Jackson County goes east by rail, but none of the Bartlett production of the counties north of Jackson and Josephine could be expected to go east by rail because the quality of pears produced under the climatic conditions that we have in western Oregon are not suitable for shipment east, and won't hold up in transit.

There are canneries in Jackson County that pack Jackson County pears, but the pack is very limited. There is one cannery at Medford, a small plant, and there is one cannery at Ashland, I think those are the only two canneries in the county.

Q. All right. Now, getting back to this assumed duplica-
1385 tion of the tonnage, do you want to contend now, or assume now, that there is any duplication in the estimated tonnage of canned fruits and of fresh fruits for any of these western Oregon counties north of Jackson and Josephine in Exhibit No. 1? (2581.)

A. I don't wish to enter that as a contention at all. I simply brought up the point as a possibility, due to the fact that in this exhibit three thousands cars of pears are shown as going to eastern shipment, when I know that 25 per cent of them go to western Oregon and are canned.

Green prunes cannot successfully be shipped east from western Oregon. They can be shipped successfully, from a physical standpoint, from down near around Payette, Ontario, southwestern Idaho, and they can and are shipping prunes successfully out of what is known as the Freewater-Milton district, which is up in Umatilla County, and they are shipping prunes, green prunes, successfully from the Walla Walla district, in the southeastern extremity of Washington. They ship a good many plums east from California, but practically no prunes. (2582.)

As to the different shipping characteristics of the plums from California and the green prunes of western Oregon as traffic, I would say it would be considerably more difficult to ship green prunes from western Oregon than plums of different varieties from California. They do not ship green prunes from Clark County, Washington, across the river here, east, to any appreciable extent. Due very largely to the physical make-up of the prune, the same as applied to the other fruits I mentioned, green prunes can be shipped successfully from Walla Walla and the Milton-Freewater district and the Payette district in Idaho, and not from western Oregon. They are entirely different prunes. If the western Oregon prune producers had substantially shorter routes to market, or could get to eastern markets three days quicker than they can now by existing
1386 routes, it would not have much effect on the disability against successfully shipping green prunes east from western Oregon. (2583.)

I have said that hogs in the Pacific Coast States were not produced enough for their own requirements. That is absolutely true of the State of Oregon.

Q. Is it your judgment generally, Mr. Shinn, that any product of western Oregon, as traffic, as rail traffic, is inferior in some way or other to similar products of other sections and States?

A. The question is a little obscure. I don't get your meaning.

Q. Well, as I listened to your testimony all the way through it gave me the impression, and I wondered if I got the right impression, that you wanted to leave the inference or make the point that

the products generally of western Oregon, for one reason or another, were inferior as traffic to like products of other sections or other States, and, therefore, were under a severe marketing disability when it comes to the producers attempting to sell and ship them into eastern markets. Now, was that a point that you wanted to make?

A. Absolutely not, and I can't see that I have left that impression generally. It isn't a question of inferiority of western Oregon products. The opposite is true—western Oregon products are of a very superior quality, but they are not adapted to certain means of physical handling in placing (2584) on the market in ways that were not originally intended for those products. With respect to prunes, the dried Italian prune as produced in western Oregon is one of the finest products that was ever raised, but it never was intended for a fresh fruit shipment, and it never was resorted to until such time as there was such an overproduction and such a surplus of that dried product on the market in competition with Cali-
1387 fornia's product that as a last resort they tried to ship it east green, and it has been a miserable failure.

As to how much of the hay given in my estimate of eight hundred fifty-four thousand tons as having been produced in western Oregon was leguminous hay, I can't give you those figures up to date as affects that particular figure, for the reason that annually there is a report gotten out by the Federal department of estimates, crop and livestock estimates, in conjunction with the extension service of the college, and they do not segregate leguminous and grain and grass hays, but every five years there is what we call the—I have forgotten the name for it, but, anyway, the Government gets out a more detailed report in which it has segregated those varieties. Now, I can give you those segregations in 1925, but not since (2585) then, and they wouldn't correlate with this total figure, because this total figure is for 1926, or the year following, so they wouldn't check. I think I can give it on a percentage basis, so that you may know approximately how much is leguminous, and approximately how much other kinds. The 1925 census shows 107,116 tons of clover hay, 19,790 tons of alfalfa hay, 207,502 tons of grain hay, and 15,104 tons of wild hay. However, I wish to make this statement, that grain hay as listed in here, and most of the grain hay as classified as grain hay raised in the Willamette Valley, is a mixture of vetch and grain hay. There is very little, practically none, figuratively speaking, of straight grain hay produced in western Oregon. It would not be correct to say that substantially only one-third of that total hay production in western Oregon is what is commonly referred to as cow hay, or leguminous hay and the other two-thirds is horse hay, because, as I state, this 207,502 tons of grain hay is a mixture of vetch—generally vetch and oat hay, which is considered first-class cow hay.

Q. But is it not true that authorities on dairying, the agricultural college, advocate the use of, and that dairymen prefer to use, the leguminous types of hay, and particularly alfalfa? (2586.)

1388 A. I would say yes and exclude the "particularly alfalfa." I don't think the statement is correct that for dairy purposes alfalfa hay, especially that grown east of the Cascades, is valued from two to three dollars per ton higher for feeding purposes in connection with dairy herds than other types of hay grown in the Williamette Valley. I do not mean that I don't agree with that myself. I said I didn't agree that it was considered such.

Q. Well, do you believe that the alfalfa does have a feeding value of from two to three dollars more per ton than the valley hays?

A. Now, you say valley hay. We are producing alfalfa in the Willamette Valley.

Q. Than other valley hay?

A. I would say that it had a higher feed value, but as far as saying that it was three dollars more value I wouldn't draw the line at three dollars. I wouldn't say just where that line comes. (2587.) The point is that alfalfa has the higher protein content than other classes of hay. Protein is the highest priced—protein classes of feed are ordinarily the highest priced class of feed, consequently if they can get a hay that has a high protein content it has greater value from that element, that feed element.

At the present time the alfalfa production in western Oregon is very small compared to the total hay production. But it will not be true within five years, and I base that statement on this fact, that only three years ago the entire acreage in western Oregon, exclusive of Jackson and Josephine Counties, which are irrigated—in other words, I mean the counties in western Oregon that are not irrigated had only three thousand acres, and in three years time they have increased that acreage to over eleven thousand, and in one county that I know of they planted a thousand acres in one county this spring. They have just found out that they can grow alfalfa successfully in western Oregon. That thousand acres was planted in Washington County, which is the leading dairy county
1389 in western Oregon, not excluding the coast counties, and only a few years ago Washington County had less than two hundred acres of alfalfa, and today she has forty-five hundred acres of alfalfa. (2588.) That has been within five years time, that increase.

I would advocate the production of alfalfa hay in Marion County on several types of land. I would say, if you want classification of soils, that I would advise it first on the Newberg series of soils, the Newberg loams, the Newberg fine sandy loams, and Newberg silt loams. I would advocate it, second, on the Chehalis types of soils, different various percentage of silt, sand and loam mixed; I would advocate it, third, on the Willamette type of soils, which we have in the Howell section in Marion County, and they are raising it successfully there now.

I would advise it on lands that you might call their marginal acreage, such as the hill lands, and their only limiting factor on those cheap soils of the hill lands is the acid content of the soil, which can be readily rectified by the application of lime.

Q. Well, it is only the marginal lands of lower value that you would advocate the growing of alfalfa on, and not the three or four hundred dollar per acre land in Marion County, is that correct?

A. I didn't know there— What do you mean by three or four hundred dollar an acre land in Marion County? (2589.)

Q. Well, you have a lot of land in Marion County valued that high, haven't you?

A. Well, we have a very small area of agricultural land in Marion County valued that high, and that type of land is what is locally known as Beaver-dam land, of which there is quite an extensive area north of Salem, given over entirely to truck gardening, which is largely celery and onions.

Exam. ROGERS. What do you mean by "marginal acreage"?

1390 A. By marginal acreage of land I mean that type of land which is incapable of a maximum production due to natural conditions which cannot be overcome by the producer. Now, to give you an example, I mean lands where they have frost every month in the year and maybe only a forty-day growing season, the grower has no control over his frosts; or land where it is saturated with alkali and a subsoil of heavy content, where it cannot be washed out, as it can be done in some instances—or, I mean, getting back into western Oregon marginal lands, it will never produce a maximum tonnage of alfalfa per acre which is shown here in the survey of the college as something over three tons to the acre. Now, on this marginal land probably two tons will be the limit. Such acreage is——

Exam. ROGERS. Well, that is an inferior grade of land, is that it? (2590.)

A. Yes; inferior from natural causes which the farmer or producer can never overcome.

From an economic cost standpoint I would that as to the better grades of land, and suggest devoting the better grades of Willamette Valley land to producing alfalfa hay in competition with the irrigated sections of western Oregon. To bear that out, I have here a circular published by the Oregon Experimental Station, under the heading of "Cost of Production of Important Forage Crops in Oregon in 1925 and 1926." This is Progressive Report No. 2 upon the forage cost project, and it was put out under the direction of J. T. Jardine, director of the Oregon Experiment Station, and J. T. Scudder, chief of the department of farm management.

They have carried on over the last two years a very thorough and extensive survey on the farms of western and eastern Oregon, the irrigation projects and the dry land, that is, the unirrigated lands, as well, and by actual contact, as they describe in this circular,

1391 with the producers (2591) themselves, interrogating them on the cost of production, they have arrived at certain conclusions, and I want to give you the cost of production here on these forage crops by districts, also the tonnage.

Malheur district, gives an average tonnage per acre of alfalfa hay produced as 5.1, at a cost of $7.11; Baker and Union district, an average production per acre of 2.9 tons, with a cost per ton of $6.56; Umatilla district, with an average production of alfalfa per acre of 3.1, with a cost of $8.96 a ton; Deschutes district, with an average tonnage per acre of three tons, and a cost of $8.41; Klamath district, with an average production of alfalfa of 3.4, and a cost of $7.72; Rogue River district, with an average of 3.9, at a cost of $9.02 per ton; or an average for all of those irrigated sections of 3.5 tons to the acre, at a cost of seven dollars and ninety some—the last figure is blurred here—per ton. That is all in the stack, unbaled, and it takes these items in making up the cost. (2592.) Direct man labor, overhead man labor, horse labor, machinery, automobile, fertilizer, irrigation, water, taxes, interest on land, depreciation on stand, and miscellaneous.

To get over into the Willamette Valley, the average cost per acre of Willamette Valley hay crops: Clover hay, with a production per acre of 1.8 tons, at a cost of $7.38 per ton; vetch hay, at an average production of 3.2 tons per acre, at a cost of $10.29 per ton; alfalfa, with an average per acre production of 3.7, at a cost of $9.11 per ton; the other is grass hay, and unimportant; cheat hay, two tons to the acre, $8.77 per ton.

You asked me the question as to whether I would advise the production of alfalfa in western Oregon in competition with eastern Oregon projects. In this survey the valuation of property in both
1392 instances is taken into account under the item of interest on land values, and is charged up on the tonnage basis to this hay, so that it is not necessary to draw any comparisons other than that to land values in the production of this crop, and as against this cost as arrived at by the college of this hay in eastern Oregon on the irrigated projects on a tonnage basis I would (2593) draw your attention back to our alfalfa figures, as to the cost in western Oregon of $9.11, as in Rogue River—well, that is in western Oregon, so I won't notice that—but in Deschutes County of $8.41, Umatilla County of $8.96, Malheur, $7.11, Baker and Union, $6.56.

When we can produce a high quality of alfalfa hay—as you said a while ago, it has a high feeding value—at a cost of $9.11 a ton in western Oregon, I would certainly advise the farmers to put in all that they can consistent with their own consumption of livestock. The last figure I gave of cost in the Willamette Valley on alfalfa hay was $9.11, with an average production per acre of 3.7 tons. These figures are issued here under the heading of tests made up on experiment stations of the Oregon Agricultural College. I don't know as I heard Mr. Teutsch's explanation of how they were made up, but the man who made up these figures is Mr. Scudder, the chief of the department of farm management, who has been there for twenty years, made this statement to me in turning this copy over to me—he said, "The eastern Oregon irrigation districts cannot compete (2594) with western Oregon produced alfalfa, and it will

never be practical for them to ship alfalfa into those sections in competition with the quality of alfalfa hay that we are producing in the Willamette Valley at these figures." I don't know whether he was taking into consideration in that discussion present transportation facilities and rates and length of haul or not, but I imagine he was. He knew it would have to be hauled over here. I would say from my experience that it is not true that Willamette
1393 Valley dairymen are buying and using in substantial quantities alfalfa hay that is produced in eastern Washington and eastern Oregon. (2595.)

Exam. ROGERS. Mr. Shinn, I got the impression from some of the witnesses—that is, that it was their impression—that the land was so valuable in the Willamette Valley for the production of other crops that it would bring a greater return—that these witnesses thought that it would be better to devote that land to raising other crops insead of devoting it to alfalfa, and import their alfalfa from other sections.

A. Yes; well, that isn't the case. Had I been in a position to question those witnesses I would have asked them to state what crops they had in mind that would be more profitable for production from the standpoint of the producer, but I wasn't in a position to draw that answer out, because as a matter of fact, the western Oregon producer of a great variety of crops has been fooled and has been laboring under a hallucination in many instances that he couldn't grow staple crops on account of inflated values on that land, which were fictitious values, and as a result he has got an overproduction of prunes and no crop—he had this last year more loganberries than the canneries could take, and they dried up on the vines; he had more strawberries than the canneries would consume at a profit to him, and so on down the line with practically all of these so-called high producing crops that would give him a wide margin of profit—it is fictitious.

Exam. ROGERS. I got this from some of the witnesses, also, that in some of the dairying activities they thought (2596) it would be better to devote the acreage to pasture instead of to raising alfalfa, and import their alfalfa.

A. From what I heard of the testimony I think that was from witnesses from coast counties—Coos and Tillamook Counties— they have there a different condition.

1394 We can divide western Oregon up into three dairy sections that are operating under different conditions. The Willamette Valley is the big dairy section, both from the standpoint of the number of cows and the value of dairy products. Then we have the coast section, which is made up of Clatsop and Tillamook and Coos and Curry Counties, which are right next to tidewater, and they have a moist climate there, and it is more difficult for them to cure their hay. And they have another condition there whereby they can maintain a pretty fair stand of pasture throughout the summer, where they cannot in the Willamette Valley. They feed

some ensilage during the summer and cut corn green and feed it to the cows and give them other green feed. Well, another case of inflated values. Here some years ago, those counties of Tillamook and Coos, pasture was good there, and the grass was green and heavy and they started in there with those cows and gave them a wonderful production, (2597) with the result that that land jumped in value, it went up as high as—actually some sales in Tillamook County as high as a thousand dollars an acre, but after they had pastured those lands over a period of years that rich virgin grass and all—became just a little bit shorter every year, and the pasture wasn't quite so good, until it has reached the point now, where they were feeding several head to the acre in those days that they have come down to pretty short pickings for one cow to the acre during the dry months of the summer, and as a result, too, the lands, when it comes to actual purchase, have reached the point where their value is more nearly $200.00 to $250.00 an acre on that land. (2598.) That is in Tillamook and Coos Counties, and I got those values direct on my visit down there to Coos County last week, talking to the feeders.

Comr. McManamy. Following your suggestion, what would you substitute for this acreage of loganberries and prunes, and so on, that are not profitable?

1395 A. There is one of the largest problems that we have in western Oregon today, and it is a problem that we are up against every day. In many cases those farms can be reorganized to go into other pursuits. Sometimes they are on a type of soil and location where it is very difficult to reorganize them, and it is the biggest problem we have on our hands today to know what to do. Those men are some of them discouraged, but I will say this, in answer to that original question—and in the position that we are in there in my work I have a chance to know that the men who have the money, the farmers in the Willamette Valley, in the Salem district, who have the money today and are in the best financial condition are dairy farmers and sheep producers, especially sheep and dairy men and men that are raising some livestock—they are in far better condition than the small farmer who is raising a concentrated crop on a very few acres. (2599.)

Comr. McManamy. Well, isn't it a pretty general proposition that the berries and fruits are raised on comparatively small tracts?

A. Yes; that is true, small tracts. I would say that the prune orchards will average, oh, from twenty to forty acres in Marion County. A good many of them on up as high as a hundred. On the other hand, there are a great many small tracts, and the movement today is not from large to small tracts—it is from small tracts to large tracts, to get away from this surplus of fruits that we have that confronts us over the country as a whole, and to get back to the ground floor of agriculture, which is livestock in the Willamette Valley, dairy and sheep.

Comr. McMANAMY. That would be, then, the consolidation of a great many of these small tracts into larger holdings, on which it would probably be profitable to raise livestock and general farm products?

1396 A. Well, theoretically so, but unfortunately practically it isn't so, because, as I say, many of those fruit ranches are up on a hillside and are not adapted to uniting several of those farms under one head, and the human element enters in, and it just isn't brought about. It is a problem that we haven't solved yet.

Comr. McMANAMY. Now, coming through Jackson and Douglas County a short time ago I noticed a great many orchards there. To what extent would it be more profitable to pull up those orchards and go into general farming? (2600.)

A. I don't think it would be profitable in Jackson County. Jackson County is a fair district, and I think that is their best crop, on the proper type of soil. Of course, they have a great variety of soils in Jackson County. Some of them are not adapted to the production of pears at all.

Comr. McMANAMY. Well, what I was leading up to, would it increase or decrease the production, and would it improve the prosperity, the general prosperity, of that section of the country, or otherwise, to make a change, which I gather from your testimony you think would be beneficial?

A. The points that I made there—or my discussion referred more to the Willamette Valley. Jackson County, you might say, stands by itself. It is an entirely different country from the Willamette Valley. It is different from a climatic standpoint. It has soil there that don't occur anywhere else in Oregon. It is a higher elevation than the Willamette Valley by 1,500 feet. It is more like the northern California climate than it is an Oregon climate.

Exam. ROGERS. Well, are we to understand that they used to import some alfalfa into Coos and Tillamook County?

A. It was a little hard for me to get the exact situation when I went down there. The statement was made to me by a man

1397 that was in authority to say that they were raising enough hay to take care of their crops. Another man told me that during (2601) the very rainiest part of the season they could afford to buy a ton of hay at $25.00. I interviewed another man, who was the largest man that operated in the district, operated several thousand acres, and a large dairy herd, and was looked up to as one of the progressive men in the community. He told me this, that he had kept accurate accounts on his dairy herd and his operations for several years, and he had come to this conclusion, that when he reached the point where the price of hay was $16.00, alfalfa hay, he would buy hay; when it got above that he couldn't afford to buy it and feed to his cows, as against the type of hay that he produced on his own ranch, and he had his figures from an actual production standpoint.

Unfortunately I did not talk to the county agent over there and get his opinion on that. When I was there I tried to look him up, and couldn't find him. But, knowing all the facts, I think I would be willing, on the basis of my one day's investigation in Coos County, to set my judgment ahead of the county agent who has studied the problem for several years. (2602.) Because statistics show from Coos County's own economic conference, and the figures they gathered here only, I believe, it was two years ago, that their average production of butterfat for that county was only 196 pounds to the cow, and there is no cow will pay that doesn't produce 250 pounds of butterfat to the year. Now, if their general average of production in Coos County on cows is less than 200 pounds, they can't afford to pay $20.00 for hay, nor $16.00.

Q. Well, might not that production be very largely affected by their inability to get the proper kind of hay from the eastern Oregon producing centers?

A. I don't like to answer a question of that kind, because you are limiting the source of their supply to eastern Oregon.

1398 Q. Well, the proper kind of hay?

A. My contention is that their source of supply is and will be the Willamette Valley. As a matter of fact, to make my point clear, I interviewed one of the leading feed dealers, who imports hay for these dairymen; I questioned him about the cross-State line, what he knew about it and whether he felt that it would affect his business as an importer of hay in that district, and he said, "Yes, it will be a great help." (2603.) I said, "Well, in what way?" "Well," he said, "we will be able to get all the hay from Klamath Falls we want." I said, "This road doesn't go near Klamath Falls." "Well, where does it go?" I got out a map and showed him where it went. He says, "That won't help us any." I said, "Why?" He said, "For this reason, that they have got to get that eastern Oregon hay in here at the same price we can buy it from the Willamette Valley, or we will never ship any in."

I imagine that it is approximately correct that, up to the present time, 19,999 tons of alfalfa is the greatest amount that has ever been produced in any one year in the Willamette Valley. It is a new industry. Although, according to Government figures, there is a hay consumption of more than 800,000 tons in western Oregon.

Q. Now, as a general proposition, is it now true that the agricultural development of western Oregon has been governed to quite a large extent, and the products produced have been selected, because of the transportation situation, as much as any other governing factor?

A. Well, when it comes to my figuring the importance of the various factors and what proportion transportation has had, I am not in a position to state, but I would undoubtedly say that transportation had a great effect on a question like that. (2604.)

I made a statement to the effect that the products of
1399 western Oregon are almost identical with those of eastern Oregon and southwestern Idaho, with the exception of beef cattle on the range, under range conditions. The general methods of farming are distinctly different in the two sections, due to the fact that one is an irrigated section, and the other is not. The nonirrigated area in western Oregon produces very largely the same commodities as are produced in the irrigated sections of southwestern Idaho. I wouldn't say that those commodities go very largely to the same markets. I would say that a great many of them go to the same markets. In other words, when I say that, there are many of our products produced in western Oregon the surplus of which goes to California. We look to California first for our surplus. If she won't take it; why, we ship it East. And the same is true, I believe, of southwestern Idaho and that section over in Oregon. The testimony here, time after time, has shown that they are anxious to put their stuff into California first. (2605.) Especially is that true with—the point I would like to bring out, that I didn't stress this morning, is on sheep. Our margin of profit to-day for the Willamette Valley farms is greater on the production of lambs for the market than any other line of production, including fruit, the highly specialized fruit. They produce a soft lamb there that absolutely cannot be shipped East, but is highly thought of and prized by the California market and the Northwest market and that is where they go—they go to Seattle, they go to Portland, and they go on down to San Francisco. Now, as the district over there decides to ship their lambs that are capable of Eastern shipment into our territory they are going to shut us off from a buying enterprise with our hands tied on any competitive market outside of the coast. In other words, due to the physical condition of the lambs they cannot be shipped East. We have got to depend on California for our market, and inasmuch as they absorb our market down there it is an absolute setback to our industry.

1400 It is not my idea that southwestern Idaho and eastern Oregon should be prevented from reaching the California markets. I don't think that any district should be restricted within this country by physical means from using any market that they can. (2306.)

I don't think the cross-State line would be much of a factor in increasing the shipment of lambs from southwestern Idaho and eastern Oregon to San Francisco, due to this cause, that the consumption of lambs on the California market is going to depend on the cycle of production and the margin of profit derived from the market conditions as relates to those producing centers from which you state they are going to originate. I said in my direct testimony that lambs are now being shipped to the San Francisco market from Arizona and other points in that section of the country.

Q. How do you account for your conclusion that Idaho lambs will not go there in any material quantity, when they are now going there from Arizona and other points equally distant?

A. I question as to whether the territory from which the greater part of those lambs are coming is equally distant.

Q. Do you know?

A. I am practically positive, because we have two markets, two lamb markets in California. One is Los Angeles, and the other is San Francisco, and when you take the San Francisco market it is a greater market for lambs, and when you take the (2607) distance from those territories into Los Angeles you will find that the distance, if I am not mistaken, is much greater than the territory in which you are interested. From the standpoint of San Francisco, the Willamette Valley, from the question of increase in their time, is going to take care of that market.

Exam. ROGERS. What is it that makes these lambs soft so that they can't be shipped east?

A. It is the method under which they are managed and fed.

1401 Our method in producing lambs most successfully, in the general way it is done here in the Willamette Valley, is almost entirely on pasture. They are pastured on native sod, in some cases on clover sod, and various kinds of pasture, and when the spring season comes, and the lambs—it is time to market them, they put them on a little rape pasture, and finish them off and take them to market. They are raised under mild climatic conditions. The ewe, the mother, is raised under the same conditions. She has never experienced cold, rigid weather, and as a result that lamb has been bred up to be a soft lamb, and it is a fact that is generally recognized that those lambs will not stand up for shipment east; they can't stand it. The other lambs in eastern Oregon are ranged very largely over the Federal range, in many cases, they are raised under (2608) climatic conditions, the ewes are, where it is cold in the winter time, and as a result they have bred up a more vigorous type of lamb. They are a different species of lamb, too, than western Oregon. As to whether they are ordinarily ready for market at exactly the same time—the lamb season generally extends over a long period due to the fact that we have a mild winter season in the Willamette Valley, where the ewes can lamb any time from Christmas to the Fourth of July, and as a result we are producing lambs in the Willamette Valley from one end of the season to the other.

Q. Then to that extent the marketing season is not contemporaneous—there is only a short period of the year when the Idaho lambs would be in competition with the Willamette Valley?

A. I am not positive on that point.

Now, with reference to the shipment of grain to the Willamette Valley, it is not necessarily my opinion that there will be no grain feed shipped into western Oregon from southwestern Idaho and eastern Oregon. There is a theoretical way to look at this, and a

practical way. Theoretically, no, there wouldn't. Practically; yes; there could. Why? Because of the method (2609) in which
1402 this feed is handled. As a matter of practical fact, most of the dairy feed concentrates, and the chicken feed, that is used in the Willamette Valley, is mixed in the mills of Portland, comes down from the Columbia River Basin and is mixed here in Portland in the proper proportions as regards the proper nutritive ratio, and is sent out to the dairy farmer and the poultry farmer.

(Thereupon a short recess was taken, after which proceedings were resumed as follows:) (2610.)

Q. With reference to the item of grain shipments into the Willamette Valley, it is true, is it not, along the line of your answer, that a large part of the Willamette Valley grain is supported, and that a large part of the mill feed and dairy feed is produced from wheat grown in the interior, that is shipped in and blended or mixed, ground at points either at Portland or in the valley?

A. Well, there is the interchange, but to what extent I don't know. I don't think there is any way to get at it.

I have stated that a part of the western Oregon products can not be shipped east in a fresh condition, but it is a fact that the principal market for western Oregon fruit and vegetable products must be in the Middle West and eastern markets, and I would include foreign markets. The product must move in one form or another, and if it doesn't go as fresh fruit it will go either canned or dried, or shipped cold pack. (2612.) I have not taken the position, or intended to convey the idea, that there will not be a substantial production and shipment of various kinds of agricultural commodities from western Oregon eastbound during the coming years.

My work at the bank is to advise banking officials as to the loans that are applied for by farmers, and in connection with that work I have become rather conservative, from the standpoint of
1403 good business, in the matters that come before me for attention. In order to be a good banker you do not have to be a pessimist. I would say the opposite was true.

Exam. ROGERS. Is there any increased settlement by producers along the lines of the Southern Pacific in western Oregon, farmers?

A. That would resolve itself into an interchange of farm real estate property to answer your question in that way.

Exam. ROGERS. I want to know whether there is any immigration into that territory. (2612.)

A. There has been some immigration in, and there has been some emigration out. There has not been within the past few years a volume into those areas from an agricultural standpoint, no.

Redirect examination:

The U. S. national bank at Salem has a very large clientele of farmers, and they are very diversified, all the way from Japanese, of which we have quite a large clientele, producing celery and onions in the Lake Labish district, to berry growers and tree fruit growers,

livestock men and dairy farmers—includes practically all lines of agricultural production. In so far as the bank is concerned, our operations extend over Marion, Polk, some in Linn, Yamhill, and as far south as Benton, and a few scattering accounts even further away among farmers.

Exam. ROGERS. How many farmers do you suppose you have within that area that are clients of the bank?

A. I can get at that. We haven't a mailing list of farmers, but I can get at it in this way: We circularized the district (2613) this spring among farmers, and in order to do that we took a mailing list that was loaned us from the Ford agency there, who had a list entirely made up of farmers within the radius of the Ford
1404 district in Salem, who owned some type of Ford equipment, and it amounted to over 6,500.

I might say in that connection, if the idea is to get a line on Marion County and that district, that Marion County is the leading agricultural county in western Oregon. She raises more wheat than any county in western Oregon; she raises more hogs than any county in western Oregon; she is second in the production of prunes in western Oregon. I can refer to my figures here and give you those. But, at any rate, her total agricultural output, from a financial standpoint, that is the value of her crops, is greater than any county in western Oregon.

In speaking of the different types of soil that were adapted to raising alfalfa, I mentioned the Newberg type. That does not necessarily mean anything geographically with relation to the town of Newberg. These soil types were named by the Department of Agriculture, their soils department, cooperating with the Oregon Agricultural College and their soil department (2614), of which Professor Powers is the head, has been for twenty years. They had to place a name on these various soil types, and there are about fifty of them, and they have placed certain names on soil types that I have never been able to figure out exactly that there was any connection, because we find, for instance, a type of soil named after Salem down in Jackson County in the Rogue River Valley.

The Newberg type of soil is a sedimentary soil that has been built up along the Willamette River and all of its tributaries over centuries of time, due to the sediment deposited there by the overflow of the river in high water.

The Chehalis series is a soil type of a similar nature on just a little bit higher ground, and it is described as a type of soil which was built up in the same way, but, due to the fact that many of these streams have been dredged out, cleaned out so as to
1405 allow for better drainage, many of those types don't overflow any more.

But the characteristics of those two types of soil are the great depth, without any heavy clay subsoil of an impervious nature which might hinder drainage.

Now the Willamette types of soil, which are also admirably adapted to the production of alfalfa, are a valley floor type of soil. In other words, they are never overflowed, but they still have this great depth and well drained subsoil, with (2615) no strata whatsoever of impervious clay nature. And we have large areas of that all the way from Portland on down through Lane County, the largest area being over in Washington County, where they have a good many thousand acres. And that, by the way, is really, from the productive standpoint, the highest valued land in western Oregon. That is, the type of soil found in Washington County. It is also found in Lane and Linn Counties and is found in some quantities in Benton; it is found in Marion, Yamhill, and Multnomah Counties—all the way down the line, with simply a difference in the makeup of subsoil.

In mentioning Newberg here this morning, I think I said it was in Washington County, but, as a matter of fact, it is in Yamhill County. I have had business over there and know that country very intimately. The farm I am operating is in Polk County, adjoining Yamhill, west of the Willamette River. (2616.)

The range in the commercial value of Willamette Valley land, taking as a unit, we will say, 160 acres, with fair to good improvements, from the standpoint of buildings, would be from $50.00 to $200.00 an acre. The $200.00 land is made up largely of these three type soils I have described to you. In fact, this large body over in Washington County, you can buy those farms over there for $200.00 an acre; I have known of some offered at $175.00, but they range around there.

1406 Now, that is about the highest-priced land in the Willamette Valley in any size at all, with the exception of very small limited area of this so-called beaver-dam land, where they grow the vegetables.

These vegetables ship all right. The celery and onions produced on our bog and peat, beaver dam, as well as in the northern part of the valley, are some of the best that are produced in the United States. As a matter of fact, the Lake Labish celery and celery that is moved out of the Troutdale section up here, has been exhibited in Indiana in the National Vegetable-Horticultural Exhibits for several years, and I believe three years hand running the sweepstakes grand prize over all classes was awarded to it. The Troutdale production is over on the east end of Multnomah County (2617), on the Columbia River. The Lake Labish I refer to is just north of Salem.

I have stated that the tendency was from small tracts to large tracts. I would designate a small tract as 20 acres and less, and I would designate a western Oregon large tract of from 60 acres to 200. There is not an impounding of these small tracts into larger tracts, but a migration away from them. In fact, I have had this summer any number of renters on these small tracts in

my territory come to me and ask me if I didn't know of some place where they could get on larger acreage, that they could not make it on the small tracts. They wanted to get into the sheep and dairy business. (2618.)

There are some of these small tracts for sale. Traveling out of Salem, in these districts in which I operate, you can see the for sale signs on the fences along the road.

I have known the county agents for a good many years. I do not want to depreciate the value of these county agents. I think they have their place, and I think they are valuable, but a good many of the boys have not had practical (2619) farm
1407 experience, and they are inclined to be over-enthusiastic, as from a standpoint of hard business facts, relative to a dollars-and-cents profit in farming operations.

Q. Now you were further asked about your employment by the railroad company and where you got all of this information. I gathered you have been over to Corvallis at the college several times, did you say?

A. I work with those men continually. I have been acquained with them and the faculty ever since I entered the institution in 1910. They all know my position with respect to this case. In each case, when I consulted them in connection with this case and these problems that I was considering, I stated my position before interrogating them.

Exam. ROGERS. What is your position, Mr. Shinn? (2620.)

A. My position is in determining the facts in regard to agricultural conditions in which these parties are interested, regardless of where the chips fall.

Exam. ROGERS. I rather understood from your remarks you had taken a position with reference to the case, with reference to the cross-State line.

A. No.

Exam. ROGERS. That is not what you meant?

A. To make myself clear, you no doubt must appreciate the position of the college in a case of this kind. They have to deal, and it is their business to help the farmers in Oregon in all districts, and they have to be careful in the line of testimony they give that might prejudice any agricultural district against the institution, thereby placing them in a position where they can't do any more good for that community. Now, I simply state——

Q. The question has been asked you several times about your connection, or being hired by the railroad companies, as I understand it. Now, I am asking you whether or not, in talking with the
1408 faculty at Corvallis, or in gathering this information, you concealed from them the relation that you had as an employee of the Oregon-Washington Railroad & Navigation Company in assembling this data?

A. Not in the least. As a matter of fact, I made it a point on the start of telling them exactly what my position was. (2621.)

I was employed by the Oregon-Washington Railroad & Navigation Company to make this survey. I had never been employed by it before. I have been acquainted with, or have had any business dealings with the railroad officials of the O.-W. R. & N. Company only in this way: That during the time I was engaged in shipping perishable products I came in contact with their solicitors and agents. Mr. Spencer of the railroad company employed me. Until that time I had never heard of him. (2622.)

No one connected with the railroad company has attempted to solve this agricultural survey and tell me what to do. This study that I have made is my own study absolutely. (2623.)

GEORGE W. BUCK was thereupon produced as a witness on behalf of defendants, and having been duly sworn, testified as follows:

Direct examination:

I am a civil engineer with between twenty-five and thirty years experience. I have been employed with most of the big railroad companies of the West, the Union Pacific more than any of the others. The other companies are the Great Northern, the Canadian Pacific, the Oregon Short Line, the Atchinson, Topeka & Santa Fe, and the O.-W. R. & N., and the Oregon Eastern, and the Utah Copper Company. At present I am county road master and engineer
1409 for Multnomah County. I have been acting in that capacity for three and a half years.

I am familiar with the organization and history of the Oregon Eastern Railway Company, having been employed (2624) as engineer on location and in making the preliminary and the location for that company in the years 1905, 1906, and 1907. I know the route contemplated by the charter or articles of incorporation of the Oregon Eastern Railway Company. The map you have called my attention to, on which are indicated certain red lines extending from Vale across to Natron, near Eugene, and with certain lines running to the south from the main line, is the old location map of the Oregon Eastern Railway; that shows the surveys as made.

(Said map was offered and received and was thereupon marked "Defendants' Exhibit No. 48, Witness Buck.") (2625.)

The Oregon Eastern Railway Company was organized in 1905 and its articles of incorporation provided for a main line running from a point at or near Natron, in the State of Oregon, and thence by some eligible route to a point at or near Ontario, in the State of Oregon.

From this main line branches were authorized by its articles as follows:

Leaving the said main line from some suitable point thereon and extending to a point at or near Klamath Falls in the State of Oregon.

Leaving said first-mentioned line from some suitable point thereon and extending to some point at or near the Agency Plains, in the State of Oregon.

This line is not shown here, but it was a line running north from about Odell to the vicinity of Madras, on the Deschutes River. That line was never adopted; just a preliminary was run on that.

The third line was, leaving said first-mentioned line from
1410 some suitable point thereon and extending to a point at or near Lakeview, in the State of Oregon. (2626.)

Later the articles were amended so as to extend the Klamath Falls branch down to a connection with the Southern Pacific line at Weed, California.

I started in the fall of 1905, and continued in 1906 and 1907 in the making of definite surveys of these routes, and the same were located and, for the most part, adopted in 1907.

The lines thus surveyed, located, and adopted are indicated in red upon the map published by the United States General Land Office in 1906. That is this exhibit just introduced. As indicated by this map, the main line was to extend across the State from Eugene to Ontario. A short piece of track had been built from Eugene to Natron, and also a short branch line from Ontario to Vale, and the intervening distance represented the construction required for a line across the State.

The plan of building a branch line to the south from this cross-State line from a point called "Odell" was determined upon to the end that an improved line, as compared with the existing Southern Pacific main line, might be obtained from Eugene to Weed, whereby the very heavy grades of the Southern Pacific over the Siskiyou Mountains might be avoided.

The grades on the Southern Pacific from Ashland south attained a maximum of 3.3 per cent, and the grades from Weed north a maximum of 3.3 per cent, while on that part of the (2627) cross-State line extending from Eugene to Odell the maximum grade, as finally surveyed, was 1.8 per cent, and the maximum grade from Klamath Falls north was 1 per cent.

Following this survey, a considerable part of the necessary rights of way were acquired for the cross-State line and for the branch south from Odell to Klamath Falls; and the logging railroad
1411 from Weed toward Klamath Falls was acquired and reconstructed, and construction was prosecuted north from Klamath Falls, south and east along cross-State line from Natron, and west from Vale.

The undertaking was a joint enterprise backed by the Union Pacific and the Southern Pacific Company. The construction was prosecuted, with some interruption, until the year 1912 or 1913, when the Union Pacific was compelled to dispose of the control of the Southern Pacific by decree entered in a suit prosecuted for that purpose by the Federal Government. Construction was suspended and left a line from Weed north through Klamath Falls, completed to Kirk, a distance of 128 miles, and the cross-State line south and east from Natron, completed to Oakridge, a distance of 42 miles from Eugene.

The easterly end of the cross-State line was constructed first to Vale, a distance of 15.5 miles from Ontario, which construction was completed in the year 1906. Later the line was extended on west from Vale to Riverside a further distance of 77.2 miles, to which point it was open for traffic in the year 1914. (2628.)

In the year 1916, construction of a still further extension was completed to Crane, a distance of 126.63 miles from Ontario. In the year 1924, another extension was completed to Burns, the county seat of Harney County, Oregon, a distance of 30.16 miles.

The Oregon-Washington Railroad & Navigation Company was organized in November, 1910, and to it, in December, 1910, were conveyed the lines and properties of the old Oregon Railroad and Navigation Company in Oregon, Washington, and Idaho, and the various branch lines and subsidiary lines of that company, except the Des Chutes branch. It also acquired, in December, 1910, the lines extending westerly from Malheur Junction, near Ontario, to Vale, and the Oregon Eastern Railway Company also conveyed to the Oregon-Washington Railroad & Navigation Company, in
1412 December, 1910, that part of the projected cross-State line constructed westerly from Vale as far as Odell, and in the projected branch extending therefrom south, to Lakeview, and the contemplated branch line from Odell to Bend.

In 1912 the Oregon Eastern Railway Company conveyed to the Central Pacific Railway Company, controlled by the Southern Pacific Company, the remaining portion of the cross-State line from Natron to Odell, and the branch therefrom from Odell south, through Klamath Falls, to Weed. This last mentioned (2629) line has since been relocated several miles to the west from Odell and is the line now called the Cascade line of the Central Pacific operated by the Southern Pacific.

The dissolution of the so-called Union Pacific-Southern Pacific merger required by the Supreme Court of the United States operated to leave the Oregon-Washington Railroad & Navigation Company with its projected cross-State line terminating on the east slope of the Cascade Mountains, with access to western Oregon trackage effectively cut off.

The Oregon-Washington Railroad & Navigation Company, after constructing its line west from Vale through the unproductive Malheur Canyon, proceeded with its construction to Crane in the Harney Valley, in the hope that some traffic might be obtained from that valley.

The extension from Crane to Burns was made in the belief that a lumbering operation with substantial output would be conducted at Burns from Government timbered areas to the north, and a railroad has been built north 50 miles to Seneca to haul logs to the proposed mill at Burns, but it has not been completed nor opened for operation.

After expending large sums of money in constructing this railroad from Burns to Seneca and in the erection of a mill at
1413 Burns, the owner of the enterprise suspended the construction several months ago, after Government canceled his stumpage contract because of his inability and failure to complete, equip, and operate the railroad and the mill. (2630.)

The locations adopted by the Oregon Eastern Railway Company were prepared in view of the relations existing between the Union Pacific and the Southern Pacific systems at the time the surveys were made, and the cross-State line was planned for the dual purpose of serving western Oregon, and also of affording, by the branch south through Klamath Falls to Weed, a better north and south route.

The location of the Oregon Eastern Railway Company lines westerly from Crane are not, in my opinion, adapted at all to the situation as it now exists, and a cross-State line extending from Crane, or any other point on the Burns branch, terminating at Odell, or extending on to Crescent Lake, cannot possibly pay its operating expenses, to say nothing of its fixed charges, or interest on investment.

When the Oregon Eastern Railway program was determined upon, it could look to the Klamath Falls district, to western Oregon, to the Bend district, and to the Lakeview country for traffic, but since that time competing railroads have built up the Deschutes to Bend, and south to Klamath Falls. To the extent commercial timbered areas are traversed the timber will be moved to the large mills at Bend, which are dependent upon it, and to the mills south of Kirk, which are also dependent upon these timbered lands. (2631.)

When the previous case was heard, there was a possibility of the establishment of a mill north and west of Silver Lake on the cross-State line, but little can be expected from that district as a resource, or from any part of this Lakeview country, because of the pro-
1414 jected extension of the Oregon, California & Eastern from Klamath Falls, and the standardizing and reconstruction of the Lakeview branch line of the Southern Pacific to Lakeview, and because of the further projected line of the Southern Pacific from Klamath Falls to Alturas. The Southern Pacific Company and the Great Northern Railway Company now occupy the territory after expending large sums in construction.

The yellow line running through the center of the map—Exhibit 3, introduced in the case previously—is the projected cross-State line from Crane to Crescent, petitioned for in this case; the blue line, marked Southern Pacific, down to the point Chemult, is part of the so-called Cascade line; that is the line that was located as the old cross-State line practically to Chemult, or as far as Crescent Lake, except that it has been moved westerly some fifteen or sixteen miles. (2632.) The arrows on the map indicate where it is joint Southern Pacific and G. N. between Chemult and Klamath Falls. Off to the east, springing from this joint line at the junction there

is a line indicated as O. C. & E. Railway; that is intended to indicate the Oregon, California & Eastern. The broken extensions of that line on this Exhibit 3 are the proposed extensions of the Oregon, California & Eastern; they are surveys in those districts. The line in blue from Chemult up to Bend, marked "G. N. Railway," is the Great Northern line from Bend; that is also the joint line to Klamath Falls from Chemult with the Southern Pacific. That is the route from Bend to Klamath Falls operated by the Great Northern. The O.-W. R. & N. lines are shown in red upon the map, reflecting their lines and those operated by them. (2633.)

The Oregon Short Line operates the line from Ontario Junction into Crane for the O.-W. R. & N. The junction between the Oregon Short Line and the O.-W. R. & N. Co.'s main line is at Huntington. That name appears on the east or right side of the map.

1415 The forest reserves are shown on that map, Exhibit 3, outlined in green, and we have colored in blue the areas that have been included in the irrigation projects that have been organized or projected in this part of the State. This does not mean, however, that there is water available for the entire area shown as being in the districts. Outside of these proposed irrigation districts there is practically no land that can be farmed profitably, except for a small section bordering Malheur Lake and the westerly end of Harney Lake, on account of the frost conditions and lack of rainfall. (2634.)

There are two big timber areas in this section of the State, one lying on the north of Harney Valley, extending to the John Day country and westerly towards Prineville, and the other lying west of a line that would follow approximately the easterly boundary of the various forest reserves from Bend to the State line near Lakeview.

In completing the construction of the so-called Natron line, now known as the Cascade line of the Central Pacific, its location was changed and carried several miles to the west from Odell and the connection now suggested is at or near Crescent Lake.

Assuming that the cross-State line be built from a connection with the Burns branch at a point called Harriman at some five miles westerly from Crane, it would proceed, as indicated upon Government Land Office map—we have an exhibit on that, Exhibit 48, all ready introduced as the "Great Sandy Desert"—across through this country west of Harney. That was originally located as a low grade trunk line railroad to handle long haul business that was moving to Portland from western Oregon points from the Oregon-California State line north and, as above indicated, it can not reach this (2635) business, nor can it reach or serve any substantial areas of pine timber, and no line in central Oregon can exist without very substantial support from the pine forests, in addition to the business from western Oregon.

1416 At the time that I made these surveys there the business in western Oregon was moving from Ashland north to Portland to a considerable extent and these western Oregon lines were operated in connection with the O. R. & N.

To build a railroad across the State on the route petitioned for construction would start from a point some four or five miles west of Crane and proceed westerly through the swampy areas bordering Malheur Lake on the north for a distance of about 20 miles.

We then proceed for about 15 miles over alkali flats where the top soil has been blown into sand ridges with no growth except greasewood; here we reach the point indicated upon the map Exhibit 3 as the OO Ranch, where there is a considerable area of natural grass land and some land that can be reclaimed and cultivated.

From this point the line must proceed westerly 115 miles across the "Great Sandy Desert" where it strikes the margin of the pine timber belt. The route traversed to this point extends through a country entirely unsuitable for settlement or development and with no substantial traffic possibilities in sight. (2636.)

It is almost entirely lacking in living water and is not even a good grazing country. The elevations range from 4,100 to 4,700 feet.

This would take us to mile post 250, figured from Vale. Here the line enters a pine belt extending along the easterly slope of the Cascade Range from Bend on the north to Klamath Falls on the south.

This timber belt is tributary to the so-called Cascade or Natron line, to the Oregon, California & Eastern line, to the recently constructed Great Northern line, and to the Lakeview branch of the Southern Pacific. This timber will, for the most part, be
1417 transported to the mills at and tributary to Klamath Falls and Bend.

It is true that milling operations would be practicable, to a limited extent, in the neighborhood north and west of Silver Lake, and in the territory between that point and Klamath Falls, and between that point and Lakeview, and at Lakeview, but to bring this timber to the projected line across the State would now seem to be impossible.

There are some irrigable lands in the neighborhood of Silver Lake and Summer Lake and at Goose Lake, near Lakeview, but Lakeview does its business with the bay cities in California, and now, with its road widened to standard gauge, and with the contemplated construction and extension of the Oregon, California & Eastern line, very little, if any (2637), traffic for the cross-State line is to be expected from either Silver Lake or Summer Lake development, and, of course, none to speak of from Lakeview and the Goose Lake project.

Some business might move westerly from the Harney Valley, but it would be principally seasonal, consisting of livestock and possibly some grain. The country, however, between Crane and the OO Ranch is not adapted to any considerable diversified farming. There is some pretty fair sagebrush during the first few miles leaving the point of connection at or near Harriman, and then you pass through the overflow marsh land on the north of Malheur Lake. From there

on west for about 15 miles is the hardpan soil with some greasewood growth, where the top soil has been blown away and the land impregnated with alkali. From this point you climb the Wagontire Mountain divide and go down into the so-called Christmas Lake Valley, a distance of some 60 miles.

The country traversed is of a scab rock formation, and in climbing Wagontire Mountain it is necessary to accomplish an elevation of about 600 feet above Harney Valley, mostly on a supported
1418 line on a maximum eight-tenths grade and with heavy construction most of that distance. Heavy cuts in this section will average a large percentage of solid rock. The next forty-five miles is across the Christmas Lake Valley with the Fort Rock country in its westerly end. Here a considerable portion of the soil has been blown away but where the top soil remains, it is fair grass range and sagebrush, but otherwise it is hardpan and greasewood. (2638.)

A considerable amount of land in the Christmas Lake Valley and Fort Rock country was taken up in 1910 and 1911 by homesteaders, who attempted cultivation of the land under the dry-farming system. Nearly all of these settlers have left, and where the fences were not destroyed and stock kept out, there has been a considerable growth of wild rye grass. Around Fort Rock there is some acreage that has been dry farmed, rye hay constituting the principal crop. The valley lacks water, and practical means of conveying water to it do not obtain, at least they have not been found.

In the report on the Silver Lake project, irrigation and drainage, of October, 1915, by John T. Whistler of the United States Reclamation Service and John H. Lewis, the State engineer for Oregon—both recognized authorities on irrigation—on page 84, say:

"The soil in the flat east of the Fort Rock Unit occupies land that is too flat to afford suitable slope for irrigation or drainage and it contains a very appreciable amount of alkali which is accumulated on the surface and forms a crust. In places the texture of the soil has a heavier tendency and here the presence of alkali is indicated by the vegetation which is salt grass and greasewood." (2639.)

On page 16, they say that sand ridges form a prominent feature of the topography of the eastern part of Fort Rock Valley, and also parts of Christmas Lake Valley. East of Fossil Lake and
1419 Sand Springs shifting sand dunes reach for many miles to Pine Ridge on the east.

This Christmas Lake Valley comprises some 200,000 acres in extent, but is not promising as a substantial agricultural resource, and I am compelled to agree that the statements quoted from Messrs. Whistler and Lewis' report describe the situation correctly.

From the Fort Rock district to Cresent Lake is about 50 miles; about 35 miles of this is over the Walker Mountains into the Deschutes Valley. It is a rolling country, with a pumice and volcanic ash soil underlaid with solid rock on the ridges. There is a heavy growth of jack and yellow pine, and very little grass, and when the timber is removed it will be practically a desert.

From the crossing of the Deschutes River near the town of Crescent to the junction with the Cascade line of the Southern Pacific the country is rough, the soil volcanic ash and pumice, and the timber is mostly yellow and jack pine.

The junction will have to be near the station of Cresent Lake on the Southern Pacific, which is at an elevation of 4,780 feet above sea level. The Southern Pacific has a three track division yard and facilities at this point, but it would be necessary to build a separate yard, as it would be very (2640) difficult to operate a yard of substantial size for several months during each year, on account of the heavy snowfall at this point. Some winters the snow lays at an average depth of seven feet from November until April.

If the cross-State line is built from the Burns branch to a connection with the Central Pacific at Crescent, it will cross the recently constructed line of the Great Northern Railway from Bend to a connection with the Central Pacific at Chemult.

The resulting distance from Crane to Portland by way of
1420 this Great Northern Junction and Bend would be 468.3 miles, assuming the O.-W. R. & N. into Portland is used from Bend. This distance would compare with the present all-rail route from Crane to Portland, a total distance of 556.3 miles. (2641.)

If the route from Crane to Portland is along the proposed cross-State line to Crescent and thence by way of the Southern Pacific to Portland, the distance would be 409 miles.

If a line springs from the Burns branch at or near Harriman it will not touch a single city or town for the entire distance traversed, except a small settlement at Crescent and the junction point at Crescent Lake, at neither of which does the population total one hundred inhabitants. The line would also fail to serve any town or settlement within a distance of twenty miles on either side of it for its entire length.

On this Exhibit 3 I have shown the distance from the yellow center line on either side, twenty miles, in that shaded area; the distance of 115 miles across the great high desert is shown by this dotted, shaded line, irregularly going northwest and southeast.

I have investigated all of these irrigation districts that are indicated upon Exhibit 3. Ordinarily when we speak of an irrigation district we understand from the use of the expression reclaimed lands (2642) served by canals and laterals, with water controlled and applied for intensive production upon lands in cultivation.

This condition does not obtain to any large extent with respect to any of the so-called irrigation districts or projects that I will mention or discuss in my testimony, except in a limited way at Silver Lake.

The Harney Valley is now served by the line which has been extended from Crane to Burns.

1421 In my testimony in the previous case I classified the lands which might be considered served by the Crane-Odell line, which now may be called the Crane-Crescent line, as follows:

Arid land capable of reclamation, 82,455 acres; pasture or meadow, 148,500 acres; merchantable timber acres, 400,000 acres; land under cultivation, 47,800 acres; waste or range land, 3,376,245 acres.

The so-called irrigation projects which we considered might be served to a greater or less extent by the cross-State line, included the Harney Valley irrigation district, which, as above indicated, is now traversed by the Burns branch.

There are now about 6,000 acres cultivated in this Harney Valley, and some 42,000 acres are irrigated in the sense that the grass lands are flooded from the Silvies River, and a large quantity of native hay is thus produced. Alfalfa and small grains are grown successfully, but the grains are more or less uncertain because of the high altitude and the production largely consumed locally. (2643.) The soil survey of the valley shows that about 16,000 acres in the district is heavily impregnated with alkali.

We then come to the Blitzen project, which, as well as the Harney Valley project, is yet undeveloped, and here we find about 2,200 acres cultivated and some 20,000 acres irrigated in much the same way as is done with respect to the Harney Valley land. It is estimated that this valley contains 34,000 acres capable of irrigation.

The Silver Creek Valley district extends north a considerable distance and is located some thirty miles or more westerly from Burns. The irrigation there now is largely by natural flow and flooding during the spring run-off, as is the case in the Harney Valley and in the Blitzen district.

There have been pending for a long time disputes about
1422 water rights, which may seriously embarrass its development, but it is estimated to contain 16,000 acres of irrigable land, 4,000 of which are irrigated in the manner above described, and about 800 acres of which are cultivated. A considerable part of the valley, however, is located, in our opinion, too far north to be served to very good advantage by the cross-State line.

The so-called Fort Rock project should, in our opinion, be classified as an impossible project. The average annual (2644) rainfall is less than 10 inches. Some two or three test wells have been drilled and driven to a considerable depth, but it must be out of the question to depend upon this expensive and restricted method of obtaining water, with so many projects in this northwestern country available that are served by adequate natural flow and adjacent to railroads.

Furthermore, in the case of the Christmas Lake Valley, the presence of an adequate supply of water is by no means assured, even by the drilling of wells, and the frost conditions, to my personal knowledge, from experience on the desert, makes crop production very uncertain.

In the summer of 1906 I was through this country from Fort Rock to Wagontire Mountain, in July and August, and we kept a record; there was only two nights in that summer, three nights or

mornings, that we didn't have a fire in our camp to keep warm there. We were camping along this location while we were making the survey this way and it was pretty cold.

The Silver Lake district is estimated to contain 6,500 acres of irrigable land, of which 2,000 acres are irrigated and cultivated. (2645.) During the years 1918, 1920, and 1924 the supply of water was very short, and in 1926 there was no water for irrigation.

1423 There is a serious question whether the 4,000 acres of unsettled land can be made productive because of the presence of alkali. The annual rainfall is only about 11 inches and the frost conditions are so bad that it prevents grain from filling properly. Judging from the conditions as they appeal to me, I doubt whether very much traffic would come from Silver Lake to the cross-State line when the Oregon, California & Eastern is constructed to Silver Lake from a connection with the line of that railroad company projected from its terminus at Sprague River.

In my testimony in the previous case, I assigned to the cross-State line about 50,000 acres of timber land east of Odell Junction, but, as I stated then and feel now, much of this timber would probably be delivered to Bend in the log, because a large investment in mills has been made there and undoubtedly they look to this district for their timber supply.

Since that time, construction of the railroad of the Great Northern south from Bend has been completed, and the (2646) disposition of the bulk of the timber to the Bend mills is now, I think, practically assurred. Indeed, there is no place for the cross-State line to take it, unless the manufacture of it was attempted locally near the cross-State line, and this I cannot conceive would be done.

I also referred in the previous case to a stand of about 3,000,000,000 feet of timber on the watershed of streams running into the Silver Lake district, but, as indicated before, I now reaffirm the conclusion, that a very considerable part of this timber is too far distant to move to advantage to the cross-State line. There would be no good mill site in connection with the cross-State line, and it is almost inconceivable that it would move in the log to any point on the

1424 cross-State line, at least for a great many years. These two timber stands would comprise the merchantable timber which I assigned to the cross-State line in the previous case as 400,000 acres.

Some fifteen or twenty years ago a very determined effort was made in the semi-arid regions of the United States to develop lands by the so-called dry-farming method where, by the proper tillage and conservation of moisture moderate crops of grain could be raised every other year where a minimum rainfall of 14 inches was assured; but I think that this dry farming with such light rainfall as prevails in central Oregon has, as a rule, failed of success, and should not be encouraged. (2647.)

Generally speaking, the annual rainfall in central Oregon and in the districts proposed to be traversed by the cross-State line is substantially less than 14 inches.

Large areas classed as tillable in Lake County and Harney County which would be adapted to the raising of small grains if adequate moisture could be obtained are not and cannot be productive of crop to any dependable degree because the moisture required is not available either from rainfall or by irrigation. To render agricultural production reasonably certain in these central Oregon districts the land must be irrigated.

The greater part of the lands now classified as irrigated in this so-called central Oregon district fringing the desert produce less than a ton of low grade marsh hay to the acre. This scanty production results because the irrigation is not controlled and the water is not applied in proper volume and at the proper time. The practice is, generally, to flood the lands in the spring when the snows are melting and the streams are high and, by systems of canals and dykes, hold the water on the land for a considerable period of time,
1425 thoroughly saturating the soil. The result is a growth of natural hay which is consumed locally in the feeding of stock. (2648.) Grain crops and standard varieties of commercial hay cannot be produced under this system of irrigation. It is true that considerable areas in some of the districts mentioned are irrigated with a controlled water supply and grain, alfalfa and other hay crops are successfully raised.

If the railroad be constructed from Crane to Crescent Lake, it will serve the following irrigation districts:

The Harney Valley irrigation district, a State district in Harney County. This district extends from the north shore of Malheur Lake to the town of Burns in the northwest corner of Harney Valley;

The Blitzen reclamation district, which extends from the south shore of Malheur Lake, south up the valley of the Blitzen River;

The Silver Creek irrigation district, a State district on Silver Creek, Harney County, near Suntex;

The Fort Rock and Silver Lake districts in northern Lake County. In my estimation the Fort Rock district is impractical, and am not including it as a potential source of traffic.

The Harney Valley irrigation district was organized in 1919, and has a gross acreage of 83,000 acres and irrigable acreage of 75,000 acres. It is estimated that with the construction of a storage reservoir on Silvies River of 150,000 acre-feet capacity, they will have sufficient water to irrigate 77,000 acres, using duty of 1.4 acre-feet. (2649.)

The district has voted bonds in the sum of $2,200,000.00, none of which have been issued, and the water rights have been adjudicated in the district for 61,045 acres; this adjudication has been

appealed to the Supreme Court of Oregon and confirmed
1426 except in some few particulars left open for determination after further observation. One of these matters is the duty of water, which was placed temporarily at 3 acre-feet.

From run-off tables of the Silvies River, a copy of which is submitted—the table to which I refer is the one which you have covering the years from 1903 to 1925. It is taken from a report, as shown in the lower right-hand margin, by the Department of the Interior, United States Reclamation Service.

(Said table was thereupon received in evidence, marked "Defendants' Exhibit No. 49, Witness Buck.") (2650.)

From this report it is evident that there must be a considerable hold over some years, making it impracticable to use the entire reservoir capacity for irrigation every year, and with the seepage and evaporation losses, it is questionable as to whether they will have water for any more land than that adjudicated.

Of the 61,045 acres with adjudicated water rights, there are about 42,000 acres actually irrigated and producing crops of some kind, and of this amount 6,000 acres are in cultivated crops.

The soil survey of the valley, as shown in the report of John T. Whistler, U. S. Reclamation Service, and John H. Lewis, State engineer of Oregon, shows about 16,000 acres of yellowish sandy loam impregnated with alkali within the proposed district. This type of soil is of doubtful value agriculturally, and would require special treatment for several years, with no positive assurance that it can be successfully reclaimed.

The estimated cost to make the improvements necessary to irrigate the lands in this project is $67.00 per acre. This is from R. J. Newell's 1926 report, on page 53.

In addition to charges for interest on this sum and retirement of principal, cost of land, maintenance and operating expense, and taxes must be met.

1427 The population of the district now is about 200 people, and the railroad from Crane to Burns runs through it. (2651.)

In considering the crop production of this district the table now submitted shows what is reported to be raised in the valley, and also the average production per acre of Harney County, and the average yield per acre of all the irrigated land in Oregon, as given in the bulletin on irrigation for the State of Oregon, page 11, and bulletin on agriculture for the State of Oregon, page 22, as compiled by the 14th Census Bureau in 1920.

(Said table was thereupon received in evidence, marked "Defendants' Exhibit No. 50, Witness Buck.") (2652.)

[File endorsement omitted.]

1428 PORTLAND, OREGON, *August 17, 1928.*

GEORGE W. BUCK thereupon resumed the witness stand, and testified further as follows:

Direct examination—Contd.

At the State experiment station east of Burns, much larger crops are grown than shown in this table, and undoubtedly first-class farmers will grow much larger crops, but taking the average farmer in any of these central Oregon districts, situated as they are in such a high altitude, it is not reasonable to expect that they will produce on an average more than is produced on an average of all the irrigated lands in the State.

Practically none of the crops grown in this Harney district are shipped out but are fed to livestock and consumed locally. We understand that in 1927 there was a small movement of wheat by rail, amounting to 60,000 or 70,000 bushels, and that same moved to mills in the Snake River Valley in southern Idaho. In this district the Pacific Livestock Company owns about 33,000 acres, or more than one-half the acreage with adjudicated water rights, and the Wm. Hanley Company owns or controls about 13,000 acres more. (2653.)

With the construction and development, the taxes and annual charge per acre would necessitate making each acre productive, and this can only be done by actual settlers on ordinary farm units, therefore, we can safely assume that nothing will be done until they are certain that they can sell off their holdings to actual farmers, which at present is very doubtful.

The Blitzen River in Harney County flows into Malheur Lake from the South, and the valley of the Blitzen River and tributaries are part of the "P" ranch, owned by the Eastern Oregon
1429 Livestock Company. They have considered the building of a storage reservoir in the upper valley to irrigate about 34,000 acres; of this about 20,000 acres are now marsh hay and meadow, irrigated by flooding during the spring run-off, and about 2,200 acres are in cultivation, growing grain and alfalfa hay. The balance is good sagebrush land.

The company has built a drainage canal about 19 miles long, 10 feet deep and 20 feet wide on the bottom, and has also constructed some of the main canals and head gates. The completion of the project undoubtedly depends on obtaining farmers to buy and work the land.

From the run-off tables and size of the proposed reservoir it would appear that they have sufficient water for this amount of land with the proposed duty of 2 acre-feet.

The crops are similar to those grown in the Harney Valley district, and are for the most part fed to livestock. (2654.)

This land is from 22 to 40 miles from the railroad at Crane, over fair dirt roads, and will be from 8 to 26 miles from the proposed Crane-Crescent line at a point north of the narrows between Malheur and Harney Lakes.

The Silver Creek irrigation district was organized in 1918, and included about 18,000 acres. Of this about 16,000 is irrigable under the proposed storage reservoir; about 4,000 acres are at present irrigated by the natural flow of Silver Creek and flooding similar

to the system used in Harney Valley, and of this irrigated acreage about 800 acres are in cultivation.

Adjudication of the water rights has recently been made by the State engineer. This adjudication will undoubtedly be carried through the courts.

It is safe to say that this district will do no development work until the relative rights to the waters of Silver Creek are finally
1430 determined and a plan of colonization worked out.

Run-off tables available, as shown below, do not indicate that there is any water for more land than is in the district formed, using the estimated duty of 1½ acre feet, and if some of the larger of the claimants owning land beyond the boundaries of the district sustain their claims in the expected litigation, the project will probably be abandoned for lack of water to reclaim sufficient of the present (2655) non-irrigated land. The average acre feet for the three years described in the table was 22,099. The dictrict voted $600,000 bonds, the estimated charge per acre being $35, making a total charge for water alone about $5.40 per acre. None of the bonds have been issued, and there is no present prospect of issuance, and likewise no construction work has been done or is in immediate prospect. The climate and other conditions are similar to Harney Valley and the crop production per acre will be about the same. About 40 people live in the district now, and the crops grown are fed to livestock. The land is held at from $10 to $40 an acre, and is mostly first-class soil, but as is the case in the other (2656) districts discussed the land is largely in its virgin state and must be cleared of sagebrush, broken up, leveled for irrigation, cultivated and irrigated before it will produce revenue. The district is about 35 miles by good road from Burns. The proposed Crane-Crescent Lake line will be about 12 miles from the south side of the district. The Silver Lake irrigation district was organized in 1917, and in 1922 water was available for irrigation. They constructed a reservoir having a capacity of 18,500 acre feet, and built the head-works so that the dam may be raised to hold more water. The
1431 original district contained a gross acreage of 9,000 acres, of which 6,500 acres are classed as irrigable and 2,560 as irrigated. Because of failure to colonize and so distribute the financial burden, this district is heavily in debt, and most of the interest due on bonds since their issuance is owing either to the bondholders or the State. Only readjustment of its financial affairs and colonization can bring success. According to the 1924–26 eleventh biennial report of the State engineer to the governor, this district is burdened with outstanding bonds, bond interest due the State and warrants, to a total sum of $361,827.15. If the irrigated acreage amounts to only 2,000 acres, as (2657) reported by Mr. Struckland of the State engineer's office, then the debt per irrigated acre is $180.91; and assuming that there are 4,500 acres additional that can be irrigated, the total debt per irrigable acre is $55.66. The Summer Lake irrigation district was organized in 1918. It is located in about the

central part of Lake County, and contains an irrigable area of 4,941 acres. Its location is somewhat distant from the proposed cross-State line, and in reality the district is tributary to Lakeview and the Southern Pacific rather than to the proposed line. Bonds in the sum of $260,000.00 were issued in 1921, and the proceeds expended in construction, which was completed early in 1922. Several months later the dam failed and it became necessary to vote an additional $135,000 in bonds for repairs. Later the repairs were completed at a cost of $65,300 and operation was successful until recently, when the dam again began to leak. Of the 4,941 irrigable acres but 708 acres are being irrigated and cultivated up to January 1, 1927. The crops, altitude and other physical characteristics are similar to the Silver Lake district, though it is better sheltered
1432 from frost and wind. The misfortunes which have overtaken the district have resulted in a very heavy debt, and the State had advanced (2658) over $80,000 interest on district obligations. It seems highly probable that unless the bondholders take a loss and assist in refinancing the district and some extensive colonization effected that the district will fail completely.

According to the State engineer's report above referred to, the total bonded debt outstanding against this district, including the outstanding warrants, amounts to $415,053.67. This shows a debt per irrigable acre of $84.00 and a debt per irrigated acre of $572.10. Obviously with this debt burden settlement and cultivation of the lands in this district is not to be anticipated. As the Ontario-Burns line serves the Harney Valley, and the Burns line is nearly as accessible to the Blitzen Valley as the cross-State line will be, it therefore follows that the cross-State line as proposed can serve no additional irrigation districts except the Silver Creek Valley district and the Silver Lake district, and that these are from 8 to 30 miles distant from the proposed line.

This is the character of he location from an engineering standpoint and possible availability as a second main line for the Oregon-Washington Railroad & Navigation Company. As pointed out in opening my statement in this case, this line from Vale to Natron as surveyed and adopted is not appropriate under existing conditions. While I have no personal knowledge of the conditions that (2659) inspired the location of this line, I do know that at the time the work was progressing the Union Pacific and Southern Pacific were under the same management, and after this line was located and construction started, and before dissolution of the Union Pacific and Southern Pacific merger, I was engaged in surveying on the line from Eugene to Coos Bay and to Marshfield. I cannot believe that the line
1433 across the State would have been located upon the present survey, except as a through line reaching Portland and the coast by way of Eugene, with access to western Oregon industries, towns, and cities. Since the line was cut off from this access in western Oregon, the Oregon-Washington Company extended its line from Crane to a terminus at Burns, 25 miles northerly from the

cross-State line location. The maximum grade of the line from Ontario to Odell junction, as the same was surveyed, was eight-tenths of one per cent. The distance from Ontario on this cross-State line to Eugene and thence to Portland is 536 miles, whereas by way of the Great Northern extension south from Bend and the Bend line to Portland it is 599 miles. The distance from Portland to Ontario by way of the O.-W. R. & N. Company and the Oregon Short Line is 432 miles, the difference in mileage favoring the present O.-W. R. & N. main line route from Ontario to Portland by 167 miles. (2660.) Starting at Sherman, the junction point of the Des Chutes line with the main line of the O.-W. R. & N., and proceeding to Ontario by the O.-W. R. & N. the rise and fall is 9,990 feet. Starting from the same point and proceeding up the Deschutes to the Crane-Crescent Lake line and across the State to Ontario, the rise and the fall is 9,735 feet. The curvature, however, upon the present line from Sherman to Ontario aggregates 13,224 degrees, as compared with 25,446 degrees via the central Oregon lines to Ontario. From this it is evident that the proposed route is not attractive for the routing of through traffic as compared with the present line, because it is 167 miles longer and presents 12,222 degrees more of curvature. I have estimated the cost of this line, at present day prices, upon the surveyed location which I have been discussing, to be as follows: From Crane to Crescent, the distance, 185 miles, the cost to be $11,056,327 or an average cost per mile of $59,764. Detailed estimate is prepared on that.

1434 (The detailed statement was received in evidence, marked "defendants' Exhibit No. 51, Witness Buck.") (2662.)

The cost of the operating equipment required for this line at present prices is estimated at $661,350, the last sheet of Exhibit 51 reflecting the equipment. Total cost of construction and equipment, $11,717,677.

(Map of the roads and railroads was received in evidence, marked "defendants' Exhibit No. 52, Witness Buck.") (2662.)

Cross-examination:

The general survey or analysis of the railroad and traffic situation I have given was partly taken from my testimony in the former case and last year I went over and revised it up to date, and went over the country out there. I made a trip into that district and checked my figures and rechecked the costs and prices to adjust them to conditions as they are at present. Exhibit 48, a map, was prepared again, with slight changes, as I recollect, of the former exhibit. Exhibit 48 shows the lines that were run and completed in 1907, as far as the Odell junction. The line from Odell junction to Natron was changed by the Southern Pacific since that time. I was actively in charge of the survey between Ontario and Odell. I did not make any analysis of the traffic possibilities to the extent of making any reports, merely my observation of the country as I went through. Therefore, I have not available a traffic study. I know of no one

who has made such a study. (2664.) The principal source of traffic that was expected to support that original project, as I understood it, was to be a transcontinental line through to the coast. That is why we were locating such a high-class line. If it had been a branch line we would not have endeavored to maintain an eighth-tenths maximum grade across the State with a light curvature. Now in our cost of construction, Exhibit No. 51, we have not varied the character of construction proposed.

1435 The line from Ontario to Crane was not put in according to plan, that is original plan. Construction was considerably cheapened, and the grade up the Malheur Canyon into the Harney Valley was increased to one per cent. Originally it was eight-tenths. (2665.) If the type of line set out in our original Exhibit 51 were constructed, it would be on a substantially better standard than that of the existing line from Ontario to Crane.

Q. From the standpoint of practical railroad operation would it be fair to assume that upon the construction of the cross-State section it would be expected that the Malheur Canyon section from Crane to Ontario would be brought up to a similar standard?

A. Well, if the traffic warranted it. If there was sufficient traffic they would probably increase the standard or improve the standard of the line in the Malheur Canyon by adding more ballast. I can't tell you what weight of rail is used in the Malheur Canyon. (2666.) I have an idea it is about 85-pound rail.

Q. Other than adding some additional ballast, then, nothing further would be required to bring the Malheur line up to standard with what you have proposed in your Exhibit 51?

A. I think you will have to ask that question of one of the later witnesses, who is more familiar with that line. We are not operating that line here, and I haven't been connected with the railroad for several years.

Exam. ROGERS. Well, as it was originally put in what would the answer be?

A. Well, as originally put in of course it would have to be improved; but, as I say, I am not familiar with how it has been improved since it was originally built.

To bring it up from the original construction to the construction which Exhibit 51 shows, it would require some more ballast. If the rails are less than 90 pounds, there would be that difference,

1436 and a question of the number of tie plates per mile that are on the present line as compared with this. Those would be about the three things that would apply from what it was as it was laid out originally.

Exam. ROGERS. What is the difference in the construction that you figured on in your Exhibit 51 and the present (2667) main-line construction on the Columbia River line?

A. Well, the Columbia River line is ballasted more with crushed rock. This country up here would use a ballast of gravel, and I

understand lighter construction using heavier steel than this line uses. We are planning here for 90-pound steel. Newer construction contemplates 110-pound steel in most cases of the main line.

It is a question as to which makes the best ballast. Some gravel ballast is very fine. But over here we used crushed rock more on account of the moisture, the climate of western Oregon. By "over here" I mean west of the Cascades. Part of the main line of the U. P. is gravel ballasted. Most of it is Sherman Hill gravel which is a disintegrated granite, about the finest ballast in the world. I don't think the Malheur Canyon line was built up to main-line standard. I don't know whether it was expected to be used as a main line at the time of construction. (2668.) As to what you are to understand from my testimony as to the plan the carriers had in mind when it was built, I am stating as to when it was located. I didn't have anything to do with the construction of the main line. That was handled entirely outside of my department. I was strictly a locating engineer at that time. But from the standpoint of the location and the plan to go through to the coast, it is reasonable to assume that it was constructed with the intent to use it as a part of the main line. As far as the alignment was concerned there could be practically no change. As to the width of the cuts and fills it is my recollection that it was built about two to four feet narrower on the roadbed than standard Union Pacific construction for main line.

In compiling Exhibit 51, the estimate was made from the
1437 original profiles that were made in the field in 1905, '06, and '07, and the quantities figured at that time for that type of location. From my knowledge of the situation now (2669), I believe that I have used a fair basis or type of construction for consideration in this case. I don't see how this line through that territory could be cheapened much, unless we built it on a steeper grade. As to my suggestion on this particular line, if we were building it under any conditions now to exist, as far as I can see, it certainly would be built as cheaply as possible. But I would consider it merely as a branch line, with any doubtful earning capacity, and we would want to get it there with the least expense possible.

Q. Do I understand you to say you would consider it as a branch line, and yet you have asked the commission here to take into consideration in arriving at its costs full main-line construction standards?

A. That is immaterial as far as my opinion is concerned. I am making an estimate on the survey of the proposed line.

Comr. McManamy. If it were built in accordance with the standard of an ordinary branch line, could you give an estimate as to the percentage your figures would be reduced approximately, or would you care to?

A. That would be very difficult to do. I am not really familiar with whether on the branch lines to-day they use lighter steel (2671) than they used to in years gone by. We used to use a second-hand steel when I was in the railroad construction, but my understanding

now is that there is practically no second-hand steel available and that they are using, in nearly all cases, this 90-pound new steel, even on new branch-line construction. As far as grading is concerned,
1438 there could probably be a little difference by increasing the grade to 1.25 per cent on portions of the line and a little narrower roadbed would save some percentage. Naturally you could figure that. Anybody would understand that. I doubt if it would be 10 per cent. Say nearer five. In my estimate I have made provision for terminal facilities at or near Crescent. Figuring on estimate of shop, small; two-stall engine house, at a point half way between Crane and Crescent, and one at Crescent; and coaling station, a small coaling station there and a small coal dock; a heating plant and cinder pits; small shop building, oil and store house, sand house and dryer and a foreman's office and locker. This is on page 4 of the estimate. I have noted two or three each (2671) at different points there. Of course there would only be one of each of those at the Crescent terminus. One is to be located approximately half way across the line; we estimated there for the intermediate division. The length of our divisions under this plan would be about 90 or 95 miles. It is a little short, not for the freight division. You could not make one division out of the whole distance. As to comparison of Exhibit 41 with the one previously made in the earlier cross-State case, this has been varied considerably as to these features, and the tracklaying to some extent, in that the conditions have changed since that other estimate was made with reference to those things, and the estimate of operation by the operating department changed the necessity for the number of buildings and improvements we had planned in the former situation. I was out over the route of the proposed line last fall. (2672.)

Q. What facts did you find that you did not have before you at the previous hearing, that caused you to make these substantial changes?

A. Well, they were not made by me; it was by the operating
1439 department and given to me to change my estimate to fit with their estimate now of what they considered was necessary for the operation of the line.

As to the principal changes given by the operating department, it is my recollection there was not as large terminal facilities, or in buildings, there was a difference in the number of depots they estimated. As to the location of the passenger depots, they would have to be located at approximately every other siding along the route, according to their estimate. A place for the operator to live (2673) and build it as a combination passenger depot and living quarters for the operator and agent. (2674.) They would be located approximately 25 to 28 miles apart. I think they estimated on this construction their sidings about 14 miles apart. I think the former estimated length of siding was 3,600 feet. It has not been changed. These sidings are for passing tracks and loading purposes. In some places where the depots were there would be

house tracks built to the depot in addition to the siding. A 3,600-siding would accommodate about 80 cars.

Q. Using 3,600-foot sidings, spaced at intervals of fourteen miles, will permit you to handle very heavy traffic, would it not?

A. Well, I don't think I would be able to answer that. We usually build them six miles apart on main lines. I have never had anything to do with the operating (2675) end of the railroads. You could operate a good many heavy trains over a line so constructed. Since the line passes through no towns between Crane and Crescent, as to whether these six passenger depots would be justified, they would not be justified as passenger depots alone but as a combination building. There would be a waiting room. For $5,000, you are not building much of a depot and house. I contemplated an agent should be stationed at each of them. I intended to fence all of the right of way. (2676.) The area through which we would pass is a grazing country. There is stock running on the range all
1440 the time, in the spring and fall and some in the winter.

All the way over the Wagontire Mountain divide, and after you leave the Fort Rock country into the Crescent Lake country there would be solid rock encountered there in the deeper cuts. I included some more solid rock excavation in this Exhibit 51 than I did in the previous estimate, but the previous estimate did not include the line from Odell to Crescent Lake. I think this is solid rock I have added between those two places.

Q. In preparing Exhibit 3, the large map which purports to show the area which would be served by the cross-State line, what factor did you take into consideration in outlining the area which you have enclosed in the heavy brown line?

A. Well, we figured that approximately twenty miles each side (2677) of a line would be the territory served by it.

Q. Are we to understand from that in your opinion a line of railroad more than twenty miles distant from a producer or a given community will furnish it no service?

A. No; of course if there was no other railroad in the country for a long ways, why, it would take in more country, but on an average for economic haul to a railroad of farm products I would consider twenty miles about as far as a person would want to haul staple crops. I believe Alkali Lake is over 65 or 75 miles from its nearest railroad transportation to the south.

Q. Well, why should the dividing line of that territory be twenty miles from the cross-State line and sixty-five miles from the nearest transportation to the south of there?

A. Well, there is nothing in south of that line that needs any railroad service within that distance that would stand for an economic haul. It would be immaterial if we run that line down there another 10 or 20 miles south.

Q. Well, wouldn't it be more fair, Mr. Buck, to place that
1441 line half way between the nearest transportation to the south and the (2678) cross-State line?

Mr. SPENCER. It isn't a question of what would be fair—as I remember the interrogatories of the commission—I may be in error in that regard—that asked for conditions on 20 miles of either side of the line. I think that is the reason for this. It isn't a question of fairness.

Mr. ELLIS. Well, with the understanding that this is not the witness' idea of the territory that would be served, I would have no objection to dropping the question, but I had understood that that was his idea of the area that would be served by this line. If that is not the case, why, my questions are unnecessary.

Q. (By Mr. ELLIS.) Is that true, Mr. Buck? Did you not intend to tell the commission that the area enclosed in brown was the area, and the only area, that would be benefitted by the cross-State line?

A. No; I wouldn't say that. When this 25-mile area was laid off, I do have a faint recollection now that that was the original questionnaire when this map was made. That is the only reason we have made it this way.

Q. In your opinion, Mr. Buck, would traffic move to this line (2679), the cross-State line, from territory substantially more than twenty miles distant?

A. It will all depend on what the traffic was.

Q. Well, the grain, hay, and livestock traffic, such as is generally produced throughout the eastern and central Oregon territory, would that move more than 20 miles to a railroad.

A. Livestock might, but I doubt if anything else.

I am satisfied hay wouldn't move more than 20 miles to a
1442 railroad. Couldn't afford to haul it that far. If grain were raised in that territory, it might be hauled. There are no vegetables and fruit there to haul. There are vegetables and fruit along the shores of Summer Lake but they have to go over a pretty high mountain to get to this line. You can haul vegetables and fruit any distance you want to—the question is whether they would arrive ready for market, or in any condition (2680) to sell or to use.

Q. (By Mr. ELLIS.) Then is it fair to assume from your testimony, Mr. Buck, that the entire area of eastern Oregon, beginning at a point twenty miles southerly from the tips of the branch lines of the Oregon-Washington Railroad & Navigation Company extending south to a point 20 miles north of Lakeview and west to a point 20 miles east of the north and south line from Bend to Klamath and 20 miles west from Crane, is not served in any manner by railroad transportation at the present time?

A. I would consider it wasn't, except as to livestock. The divide is practically half way between the western border of the heavy brown circle area on Exhibit 3 and the Deschutes River, or the old Odell, and lies to the south. About mile post 180 would be the ridge of the Walker Range.

Q. You wouldn't expect that traffic from the Fort Rock area could move economically by truck haul or similar means of trans-

portation over the Walker Range to the present line north and south from Bend to Klamath, would you? (2681.)

A. Well, under ordinary conditions, no. I don't know what the economics of truck haul is to-day, it is being developed so rapidly. I think I testified that the area in the Harney Valley would not be directly served by the proposed cross-State line, because it was now tributary to the Crane-Burns line, recently constructed. I couldn't say where traffic moving from that territory finds its markets.

1443 Q. Do I understand that you have not intended in your testimony to pose as an authority on whether existing transportation facilities were sufficient to take the products of the country to their logical market?

A. Why, they have a rail line extended through their district on which they can ship their products. It may not be the shortest line to the point where they want to ship them. If the principal markets for the products of Harney Valley were west, the cross-State line would (2682) give them a shorter distance to the market.

As to the difficulties being encountered in the numerous irrigation projects in central and eastern Oregon, financial difficulties and colonization are not entirely the principal objections. The amount of available water is questionable and in most districts there is a question of soil, whether it is good soil or not for farming and as I stated before, in the Silver Creek and Harney Valleys there has always been a dispute as to the water rights; and the large ownerships of land, I think, would have considerable effect on whether or not they would surrender their lands at a reasonable figure so that they could be colonized. Those large land holders are offering their land for sale in small quantities at present. (2683.) The transportation question is very important in the colonization problem. Personally I should say colonization will not be at all practical until transportation is provided.

I have been through the Yakima Valley in Washington. As far as I recollect in that development and other irrigation districts developed in the western territory, it was the usual procedure to find the transportation first and the colonization afterwards. It is my understanding that the entire area enclosed within the dashed brown line on Exhibit 3, beginning at mile post 50 and extending to mile post 160, is a desert and one which can not be made productive. I am not aware that throughout that area there are at the present time settlers who are producing crops. I have not seen them. (2684.)

1444 I am familiar with the Wagontire section.

Q. Well, there are settlers there who have been farming that land and running livestock on the range ever since this cross-State line was originally projected, are there not?

A. Yes; and 20 or 30 years before, but the area is absolutely insignificant of the amount of land under cultivation. The Huttons have two shoestring ranches on the south side of Wagontire Moun-

tain. There is a small stream flows down the gulch, and they have cleared a little each side of the gulch for quite a distance down, and have always raised some crops there. The Egleys have some land around on the east side, but the last time I was through there it was apparently abandoned, very little done. There are two or three very small places up in some of the gulches trying to raise a little hay and grain. There was quite a ranch on the north side of the mountain called Crooked Creek; nothing in cultivation there, though there was quite a large spring there at that time. Of course, they all run stock. That was their main business. (2685.) With existing transportation facilities and a limit of approximately a 20-mile haul on grain, I wouldn't expect them to produce anything except stock.

Q. And is it not a fact that they are raising all of the grain and hay that they can make use of in connection with their livestock operations?

A. Well, that is an ambiguous question, also. I don't know how much stock they are running now. Some ranchers feed practically nothing in the winter, and others take good care of their stock and feed large quantities of hay. I think they weren't raising any more hay than they should raise at that time with the land they had and the amount of water they had. I purchased hay there from Hutton, but he refused to let me have it unless I would replace it in the spring, if needed.

1445 Q. Is it not a fact that there were a great many more settlers, homesteaders, throughout that area around Iron Mountain and Wagontire, at the time you made this original survey and shortly thereafter? (2686.)

A. Not at that time there weren't. They came in afterwards, when the rush went in for these dry-farm homesteads. One of my teamsters who was raised over in that country took a homestead in below Hutton's ranch there, on the side hill. It was fine-looking land, but he finally gave it up. He couldn't get any water. Brought in a power drill and drilled over three hundred feet and didn't get any water and finally gave up; lost everything he had there. Further west into the Christmas Lake country and east down in the Harney district, you can get water at the depth of from 20 to 25 feet. The rush occurred about 1910; that was about the same time the construction of the line from the east end was projected. When the settlers left, I don't know whether (2687) it was the loss of hope of railroad transportation or whether they found they couldn't raise any crops. Of course it wouldn't have done them any good to raise crops if they couldn't ship them out.

Q. Now, on the west end of this high desert and nonproductive area, as you have termed it, you have included the entire area of the Christmas Lake Valley and a great deal of the area known as the Fort Rock Valley, and which you have marked on your map "Proposed Fort Rock irrigation district," have you not?

A. Well, that proposed Fort Rock irrigation district is the title for the irrigation district, which is colored, west of that line. The blue, hatched area is the proposed Fort Rock irrigation district. (2688.) The area east of the blue area and between the Fort Rock irrigation district and Christmas Lake Valley is not of a fertile nature in my estimation. In my judgment, that was some of the poorest-looking land in central Oregon. There is very little there that has been actually homesteaded and dry-farmed. Considerable of it has been homesteaded.

1446 I think the Ernst ranch was a few miles to the west and south of Fort Rock. I would say that there is good soil in that district there.

Q. I think you are mistaken as to the location of Ernst ranch. I am sure it is east of Fort Rock. Are there any grazing possibilities at all within this area that you say is non-productive?

A. Yes; there is a regular bunchgrass desert country; the sagebrush growth with a small amount of bunchgrass around the sagebrush. (2689.) I did not intend to convey that it was absolutely useless. Non-productive as to the growth of agricultural crops is what I meant. It is a grazing country that can be used part of the year.

As to rail locations I have made: I have located in Nebraska and South Dakota for the Chicago & Northwestern; in Iowa for the Milwaukee Road; in Utah for the Utah Copper Company; in Canada for the Canadian Pacific; and I located on the Topeka Northwestern Railroad for the Union Pacific Company in the double tracking of the Union Pacific of their main lines in the Kansas division. For the Northwestern, I located the Verdigris branch from Bonesteel, S. Dak. The end of the old branch was off the main line at Norfolk junction. The line was about 40 miles. (2690.) For the Canadian Pacific I located on that south main line from the Okanogan Summit to Penpicton, and I built that section, 57 miles; and I located part of their lines up the Similikameen River.

As to the snow conditions one year along the route of the cross-State line, we had from 12 to 14 inches of snow practically all winter. The next winter we had hardly any snow.

As to any new construction that was no more attractive than the country across Oregon, I imagine the line (2692) all the way through Idaho, when it was originally built, was through a country as nonproductive as this. I have never been over the line from Ogden down to Los Angeles. I am not familiar with that territory.

1447 In Exhibit 51, first item, 5 per cent of nine million dollars, the nine million is the cost of all the items added together and then the 5 per cent is taken of those and put to the head of the column (2692) and added to the total, then, makes your total cost.

Q. All of what items?

A. All of the detailed items in the estimate on that point.

Q. Well, would it take through item 74?

A. Take to item 74. It does not include the 10 per cent of the interest.

I don't think there is much difference in the unit costs now than at the time I made my previous estimate in the previous case in 1924. There have been some contracts let at a little greater figure than they were at that time, and especially in classification. I think materials would be a shade lower than in 1924.

The allowance of $37,000 for law, on page 5, is a standard set-up of a certain percentage; according to the costs that have been proven in the past, legal expenses averaged about that per mile.

I think the total rise and curvature via Portland from Eugene to Ontario would be about the same as via Crane. As to the status of the right of way across there, I think it has been relinquished to the Government on this cross-State line from Harriman west, in its entirety. (2694.)

Exam. ROGERS. They originally had some option on it, some hold on it, didn't they? I just recall, Mr. Spencer, at the time this case was argued before, there was some discussion between one of the commissioners and Mr. Dey about this right of way.

Mr. SPENCER. I think Commissioner Aitchison asked me that question in the argument, but the Government right of way was all that the railroad company had across there beyond Crane, and it was relinquished to the Government, on a show cause called
1448 for by the Government, I think, oh, probably a year and a half ago.

Exam. ROGERS. Well, can it properly be said now that the carrier has no right of way between Crane and Crescent Lake?

Mr. SPENCER. That is correct. Well, this line that goes to Burns proceeds westerly five or six miles. We have got that. We haven't any right of way west of the Burns branch. That is the Oregon Washington Railroad and Navigation Company hasn't. (2695.) The route that follows the survey and location made in 1906 and '07 between Natron and Vale and now the uncompleted portion of it between Crane and Crescent Lake is a feasible and practicable route from an engineering and cost standpoint for a line of railroad. There could be no further development in that section without a railroad, agriculturally. It was the Oregon Eastern Railway Company that was organized to build this line across the State in 1905. I think its capital stock was owned by the O. R. & N. I don't think the Oregon Eastern Railway Company is still in existence. (2696.) I believe they were building on both ends of the proposed route. They started at the east, and shortly after I started my locations, and when I got across to Eugene they had the line built to Natron there the following year.

1449 Q. You said, Mr. Buck, that the cross-State line could not possibly pay its operating expenses, not to mention interest on investment and fixed charges. Do you know, or have you made, any calculation of what its operating expenses would be?

A. No; I did not in this estimate. I did in the other case, I think. The operating expenses were furnished by the general superintendent of the O. R. & N. as estimated from the traffic that was estimated to be allocated to the line.

Q. Your opinion, then, in making that statement, was not based on any investigation or study or ascertainment of facts that you yourself made? (2697.)

A. No; not as to anything but my judgment of the traffic available in the territory traversed by the line.

1450 Greasewood is a brush of stubby growth, very little foilage and prickly, and indicates the presence of alkali. The leaves are heavy and drop off and lie on the ground. I never saw any animals eating them.

Q. Now I understand you to say that there were so many projects in the Northwest with water available and railroads already there, that this cross-State line ought not to be built while the others are undeveloped. Did you say substantially that? (2698.)

A. No; I said—I did not consider that these projects would be settled by colonies when there were so many other projects with sufficient water that were served by railroads, with land available for colonization. In my opinion there was no opportunity for colonization in the area tributary to the cross-State line, in view of the lands available in other irrigation projects in the Northwest where transportation was available. That circumstance would not affect my judgment as to whether the cross-State line ought to be built. The other projects that I had in mind in the Northwest are around Bend and Redmond that have rail transportation and ample water and good soil; projects over in eastern Oregon, located between Umatilla and Pendleton on the main line of the O. R. & N. have ample water; and then there are several projects in Idaho all the way up the Snake River on the main line of the Oregon Short Line and its branches.

Q. What traffic was it that was contemplated would move over the Oregon Eastern Railway's line when it was built across the State?

A. I wasn't the one that developed that point at all. I was (2699) ordered to make the survey across the State. As to what traffic there was there I was not informed, or what was anticipated.

Q. I thought perhaps you knew. You testified what the purpose of building the line was and I thought you might have known.

A. That was my judgment, from the fact of the type of line I was ordered to locate and the fact that it was to go all the way across the State.

1451 When this line of the Oregon Eastern Railway was surveyed and the project partly built on the east end and west end, the present line of the O.-W. R. & N. from Portland to Ontario along the Columbia River and through Huntington was built and in operation. At that time in 1905 the Southern Pacific Company's lines in western Oregon down to Roseville, Calif., and the line of

the Central Pacific from that point east to Ogden were built and in operation. (2700.)

I would think in 1905 when the route of the Oregon Eastern Railway was surveyed, it was anticipated that traffic to and from western Oregon, commencing at Portland on the north and going down to the Oregon-California State line, from and to Granger, Wyo., on the east, would move when this Oregon Eastern Railway line was completed, partly by Ontario and the cross-State line into the valley, and partly through Ogden, Roseville, Calif., and then north into the valley. At the time this survey of the Oregon Eastern Railway was made in 1905, '06, and '07, in my judgment as a civil engineer, with a great deal of experience in railroad employment and locating lines of railroad, I would think the building and operation of this cross-State line along the route of the Oregon Eastern Railway would have been justified from the standpoint of economy and efficiency of operation, keeping in mind that the Union Pacific and Southern Pacific systems were then merged and in one common control. (2701.) I think when they were all merged in one system, that that line would have been justified for handling traffic from Eugene and south to the East.

Exam. ROGERS. Mr. Buck, if the line could have been justified at the time it was originally put across there to handle this eastbound traffic from western Oregon, that justification would be increased now, if the system, as you say, were merged as before, would it not, due to increased traffic, or would it?

A. Well, I don't know whether the traffic has increased on the O. R. & N. recently, so that there is a necessity of another line
1452 to the (2702) East. At the time I was employed by the O. R. & N. previously I know traffic had decreased considerably to what it had been prior to that time, so that there was no necessity for another line to relieve any congestion on the O. R. & N. The saving of distance on this line would have amounted to something on short-time freight, but as far as my understanding of the operation of the movement of the other types of freight, a few hundred miles difference does not really make very much difference. Where the line was to cross there originally, it would have taken some traffic from the O. R. & N. If it took it in the vicinity of Eugene and north or south from Eugene, of course it would have taken some from the O. R. & N. traffic main line. The O. R. & N. never handled the maximum tonnage that could be handled over the main line. I have no information (2703) how this traffic to and from western Oregon preponderatingly moved at the time the Union Pacific and Southern Pacific were merged into one system; that is via what gateway.

Q. Now if the Union Pacific and Southern Pacific lines now constituted one system, would you say that the same justification existed at the present time for the construction of this line across the State from Crane to Crescent Lake as existed for that project back in 1905 and 1906?

A. At that time the contemplated line from Klamath Falls to Alturas was not in contemplation, according to any information I had. That might make some difference in the justification of this line here, though there is no doubt if the systems were united that this would give a shorter route to the East for part of the territory served both by the Southern Pacific, or practically by the Southern Pacific now. It is a matter of opinion but I would say if the two systems were merged, they would close up this gap (2704), and not leave those stub ends out there as they are now.

1453 The line to Alturas, southeasterly to Klamath Falls, is only 17 or 18 miles altogether before it gets out of the State of Oregon and would not afford to the undeveloped portions of the State that are now without rail transportation a substitute for the construction of the line from Crane to Crescent Lake.

Q. (By Mr. McCulloch.) Mr. Buck, suppose that at the present time although the Union Pacific and Southern Pacific systems are not operated under a single control, that compulsory interchange arrangements respecting the traffic to and from western Oregon from and to Granger, Wyo., and points east, should be made by the Interstate Commerce Commission, or a substantial part of the western Oregon tonnage, by reason of routing instructions given by shippers of that tonnage, could be insured for movement over this cross-State line between Crane and Crescent Lake to the extent, at least, of the amount of tonnage that it was contemplated would move over (2705) it back in 1905 and 1906 and '07, in your judgment would the justification at the present time, under such circumstances, for the building of this cross-State line be as strong as it was back in 1906 and '07?

Mr. Spencer. We object to that inquiry and question, because it assumes a premise without any facts in the record upon which to form a conclusion. It is involved in speculation and conjecture, and there is no warrant or showing by this witness that he can estimate or conceive as to what the shippers in western Oregon would do with respect to the giving of routing instructions.

Comr. McManamy. If the witness can't answer he can say so, but he has an opinion with respect to that I would be glad to have it. (2706.)

1454 A. If the traffic was ordered to be routed that way, as I stated in my former answer to one of his questions, it would be a little shorter line to the East, but I can't see the necessity of duplicating railroad construction, when the O. R. & N. already can handle all of this business if given to them at Portland. When I made the statement that if the lines were merged, it would close up this gap, it would be my opinion that it would close up their ends.

Q. (By Mr. McCulloch.) All my question contemplated was this, if by reason of compulsory interchange arrangements, or by reason of traffic routed by the shippers, as they have a right under the law to do, the same flow of traffic across this cross-State line were insured as was in contemplation by the Union Pacific and Southern Pacific

systems back in 1905 and 1906 and '07, would the justification for the building of this line be any less strong than it was then?

Mr. SPENCER. We object to that question upon the same grounds. There isn't any comparison between the situation of a railroad when it goes into and controls a territory as compared with the situation when it has to depend upon the mind and disposition of the shipper to route it one of several ways. Furthermore, the record shows a very great change in (2707) conditions between those dates, and this witness doesn't pose here as a traffic man in respect to present years, to say the least. He testified he hadn't been connected with railroad operation for several years.

Comr. MCMANAMY. The same ruling will apply.

A. I will make no statement as to that, as to my opinion.

By my statement that two or three hundred miles difference in distance wouldn't be material I meant to state that when I was in the railroad service traffic was routed around various ways regardless of distance involved. There seemed to be some arrangement between railroads for division of freight that controlled the routing of
1455 freight and it didn't always move by the shortest route between points.

I have had occasion to locate cut-offs and other similar improvements to shorten distance. I had nothing to do with Umatilla cut-off; it was done at the time I was with the O. R. & N., but I personally didn't have charge of that. (2708.) Grades, I think, were of more importance than distance. I did not have anything to do with the Lucin cut-off, on the Central Pacific. Substantial expenditure was made there for a 35-mile difference of distance. There is a pretty general rule or practice with respect to the investment which will be made for the purpose of improving grades and shortening distances; I couldn't give you the formulas that we used. I think in general this describes it—that if an improvement of that character will pay the carrying charges that it is looked on with favor.

Speaking of temperature on the high desert and the cold mornings, I simply intended that to apply to its effect upon agriculture and not upon railroad operations. (2709.)

Comr. MCMANAMY. The temperature there seems to be very much lower than the temperature of other places similarly located and of the same altitude. Do you have any thoughts as to the cause of that?

A. No; I do not. I do not know what causes that. I know I had a ranch down in southern Idaho at a higher altitude than this, where we matured crops that were of a much more delicate nature than you could possibly grow here, even up to apples and pears and such fruit. It is very cold out there all across that interior.

Comr. MCMANAMY. I had in mind such places as Pocatello, at 4,500 feet, and Bancroft, at about 5,000 feet, and American Falls.

1456 A. I have never been around Pocatello very much. I was around Twin Falls country and Gooding, where my place

was. Well, the Goose Lake country is still higher and much more favorable climate. The elevation of Goose Lake Valley is 4,700.

Comr. McMANAMY. Well, your experience out there didn't give you any thoughts as to the cause of it?

A. No.

Comr. McMANAMY. Now the question of snow at Crescent Lake, are there any snow sheds on the Natron cut-off? (2710.)

A. I don't believe so. I haven't ridden over the Natron cut-off, and I wouldn't be able to say, but when I went across first with my survey from the East I arrived at that summit on the 6th of June, and the snow was over five feet deep then. We had to stop. We couldn't get through. We had to wait until the snow melted before we could move our equipment over onto the west side of the divide.

Comr. McMANAMY. Is that not true of any line that crosses the Cascades at an altitude of four thousand feet or better?

A. It is.

Comr. McMANAMY. Are you familiar with the line over the Cascades on the Southern Pacific?

A. I only went over there in the night. I am not familiar with that.

Comr. McMANAMY. Not familiar with the altitude or the snow conditions of Truckee?

A. No, sir.

Comr. McMANAMY. Of Blue Canyon?

A. No.

Comr. McMANAMY. What is the altitude of Crescent Lake?

A. 4,800 or 4,900—4,860, I think.

Exam. ROGERS. Mr. Buck, do you know of any so-called cut-off that has been constructed in recent years that could have
1457 been justified if a distance of three hundred or four hundred miles didn't make any difference?

A. No.

1458 I. L. PATTERSON was thereupon produced as a witness on behalf of complainants and, having been first duly sworn, testified as follows:

Direct examination:

I have been Governor of the State of Oregon for two years. I have been a resident of the State of Oregon all my life. I was born in Benton County. I think my family moved to Polk County when I was about eight or nine years of age. I (2712) lived there until I was 19 years of age. Then I have lived in Salem most of the time since that. I spent four years in Portland, and for the last 12 years I have lived in Polk County.

In private life my occupation is at present a farmer. My farm is located five miles west of Salem. It is a diversified farm. I produce a great many things commercially, hops and fruits, some livestock.

As to what extent during my residence in the State of Oregon I have become familiar with the State, its resources and its transportation problems, well, I ought to be fairly conversant. Perhaps less conversant with its transportation problems than the other things, but I should know something about all of it.

Prior to becoming governor I served as State senator for eight years. I have held one position with the Federal Government; (2713). I was collector of customs in this district from August, 1898, to January, 1907.

Q. Now, governor, I am wondering if you could tell the commission something of the early history of the State of Oregon and its development, in so far as it has been affected by transportation or lack of transportation?

A. Well, of course, in my early recollection of Oregon there was no railroad transportation at all. We were a new country.
1459 And when transportation came the country began to grow. I might cite the Rogue River Valley, for instance. Without railroad transportation that valley to-day no doubt would be, as it was at that time, a small stock country, growing things that they could drive out. The same is true of other parts of Oregon.

Q. How has that condition been affected by railroad transportation?

A. It has given an opportunity to develop the country and produce things that we ship out of the country, which would have been impossible otherwise.

Q. What is the situation in Oregon at the present time, as you find it, as you know it, as to the adequacy of railroad transportation facilities?

A. Well, I don't know just what you mean. Do you want to know if there is enough railroad transportation to carry our (2714) products out of the country?

Q. That is the question I had in mind.

A. Well, yes; there is enough transportation to carry our products out of the country. We have no trouble at this time, haven't had for some time. One time I had some trouble with car shortage, personally.

Respecting the facts as to whether or not the State is adequately served at the present time with railroad transportation facilities, I feel, I think in common with a great many people, that the facilities could be very much improved by a cross-State railroad line.

I have in mind in that the shipment of fruits and vegetables
1460 that could be much better shipped and more profitably grown if the time for transporting to the market were shorter. I am unable to answer the question as to what extent the production of perishable products, such as I mentioned, has been retarded by a lack of short routes to markets, except to say that when you ship fruits or vegetables the length of time on the road, as anyone knows, is an important factor. I have no personal experience in that, but

I have been told that in the matter of vegetables that a day or two longer they deteriorate and wouldn't reach the market in the same condition as if there was a shorter time. The same thing is true as to fruit. (2715.)

Q. Taking Eugene, as an example, where the distance by the cross-State line will be shortened approximately 420 miles as compared with the existing route through Roseville, from your knowledge of the conditions surrounding the production of fresh fruits and vegetables would that shortening in distance be of any material benefit?

A. I thing it would be of very great material benefit.

Q. Would that shortening of distance be of any material benefit in connection with other natural resources of western Oregon?

A. Well, I would think it would. Naturally, I have been more or less in commercial business, and I have done a good deal of shipping—time is an important factor in shipping products of any kind, whether it is merchandise or farm products.

Q. Have you had occasion to make any comparison of the development of the State of Oregon as compared with the States of Washington and California, or to consider how that de-
1461 velopment may have been affected by railroad transportation??

A. Well, there isn't any question, every one knows that our development here has been much slower than that of either California or Washington, and I think, in common with most people, that lack of adequate transportation facilities has had a good deal to do with that. I might illustrate, if I may, with reference to our State road-building program. Within the last 12 years we have spent more than a hundred (2716) million dollars in building roads, that is, State roads. The counties have built lateral roads with the assistance of the State, and market roads, and anybody in Oregon knows what that has meant to Oregon, the advancement that we have had from our road building in the State of Oregon. I can't help but liken that to railroad construction and railroad building.

The principal portion of Oregon's highway construction has been within the last 10 years. I think that railroad construction within the State has not kept pace with the highway construction which has been carried on by the State.

Q. From the standpoint of functioning of the State government how is the situation affected by transportation or lack of transportation?

A. Well, of course, there is no question but that the easier (2717) the people of the State can reach the State capital—I don't know that I could say the State departments would function any better, but it would certainly be a great benefit to the people living at a distance from the capital. I think it would enable them to better utilize the facilities of the State government than they do at the present time.

1462 I stated that I produce some fruit; the kinds of fruit I raise are loganberries, peaches, cherries, apples. As to

whether I find any difficulty in the production of those fruits, I think anybody anywhere will find some difficulty in the production of fruits. Sometimes you have frosts, and other times you have rains, and various elements that you have to combat. But these fruits I have mentioned may be produced successfully in a commercial way here in the Willamette Valley; they can be and are being grown successfully.

I have the same difficulty in producing apples that they have in every apple-growing district, no matter where it is. We have (2718) anthracnose; we have it every year. We have the codling moth, we have apple scab, and we have various things. In fact, we have the same things that they have elsewhere. I am able to counteract the effect of those things and produce a good commercial product. With me it is a matter of spraying and taking care of the fruit. If you do that you produce your fruit. I think I grow the finest Delicious apple grown in Oregon. I only grow that variety of apple. It is more subject to scab than any other apple that I am acquainted with, and I grow it absolutely free from that trouble by spraying.

Exam. ROGERS. There has been some testimony here, Governor, that, while the fruit, the prunes and the apples, are of good quality, they are not suitable for shipping long distances; do you know anything about that?

A. Well, I have sold my fruit locally, as a rule. Only one year did I ship. I shipped my Delicious apples. I had two cars. I shipped them to Texas, and got good results from them.

With reference to the production of hops, western Oregon (2719) is the largest hop-growing district in the United States. 1463 The principal market for hops is in the East and Middle West. The hops move by rail, I think, rather than by water.

Q. Have you anything further to add to your testimony, Governor, as to the need of the State for the construction of the cross-State line, or as to the benefits which might accrue to the State from its construction?

A. Well, I have felt for a long time that the construction of the cross-State line would tend to develop the State of Oregon more rapidly.

Q. Do you know the sentiment of the people of this State as to whether there is a need or demand for the construction of the cross-State line?

A. I think the people of the State think there is.

Q. In your opinion, is the construction of a line such as is proposed in this case vital to the complete and satisfactory development of the State and its natural resources? (2720.)

A. Well, I don't know about its being vital. It would certainly do all the things that we are talking—I believe that it would do all the things that we are talking about. It would cause advancement in the State and development in the State more comparable with those in the States on the north and the south.

Exam. ROGERS. Can you tell us, Governor, what the State has done in the way of providing roads for this territory that would be traversed by the cross-State line? What I had in mind, I got the impression from some of the, at least inferences in the record that the State itself hadn't thought enough of this country over there that this road would go through, this proposed railroad, to provide it with roads, highways. Can you give us your knowledge of that situation?

1464 A. I know something about that. My figures may not be exactly correct, but in the main they are correct, or very close. In securing our funds for building of highways in Oregon, the territory we are talking about pays in about 20 per cent of the funds. In the allocation for the construction of roads we spend about 40 per cent of the funds in the territory east of the mountains. Last year, or within the year, there has been 27 miles of road constructed in Deschutes County, leading toward Burns.

Q. (By Mr. ELLIS.) Just one more question: Has it been your (2721) observation, Governor, that railroad construction has usually preceded colonization and complete development of natural resources in the various sections of the country, or would you say that colonization usually comes first and the railroads afterward?

A. I think the railroad comes first, as a rule.

Q. In your judgment, would additional transportation facilities in central and eastern Oregon be of any assistance in colonizing and developing the irrigation projects that are now in existence?

A. It certainly would.

Cross-examination:

Q. (By Mr. SPENCER.) Governor, if there was a railroad through central Oregon, would you encourage or sanction any activity to put settlers on the Silver Lake irrigation district at the present time, in view of the financial condition?

A. Well, will you change your question and say on any of the irrigation districts?

Q. All right, I will put it that way.

1465 If we are—if the State board is able to work out the settlement of those districts as we have now under consideration and are working on, I would say yes. (2723.)

Q. Well, if the bondholders cannot be settled with, what would you say?

A. Well, I think they can be.

Q. I know, Governor, but I am assuming that you can't accomplish your settlement with the bondholders.

A. Well, I am——

Q. Under the existing debt burden against these several districts, the Silver Lake and the Summer Lake and Ochoco and Warm Springs, would you expect any settlers to get under that load and try to work out, or would you sanction the encouragement or inducement or the attempt at inducing settlers to go on those districts?

A. When those districts are worked out, as I anticipate they will be, and be successful—and I think everybody thinks they will ultimately—I would say yes.

Q. Well, I want to know the possibility, and, in fact, we have had this difficult situation now, or the State has, for some six or seven years, hasn't it, the question of solution of the financial problems on these irrigation districts?

A. Well, it has been—I think you overstate the time. I think that you might say that the last two years is about the time that it has been under real consideration and something trying to be worked out.

Q. Well, I know, but the condition that necessitated action by the last legislature toward some—during the previous (2724) administration, did it not?

A. Yes; there was trouble there, of course, had been for——
1466 The districts were involved and State bonds were issued to pay interest on the outstanding bonds of the district, and then the interest on the State bonds wasn't paid and that condition has run along now for four or five years. Perhaps more in some instances. I will answer the question whether with that condition whether with the existing condition, any man should undertake to go on any of these districts as a settler until it is solved. But I would like to just say something else in advance of it. You are aware of the fact that when these irrigation districts were constructed probably not over 50 cents on the dollar went into the construction, was eaten up by organization and one thing and another so that the settlers on the district—or the land under the district actually paid double what they should have paid. In other words the districts were indebted double what they should have been. (2725.)

The bonds at no time should have been more than about half what they were. Under present existing conditions I wouldn't advise a settler to go in on the irrigation districts. But those conditions are not going to prevail. It is a big problem. It is so important that the 1927 legislature took action with respect to it and commissioned me as head of a board to attempt to work it out.

I was asked about the road development and the road program of the State, how it progressed. I stated that the State in its State highway system has expended over $100,000,000 since 1917 when the program started. It is true that that construction except for the so-called Roosevelt Highway on the Pacific coast has been made almost entirely along and against and adjacent to existing lines of transportation. (2726.) There has been a very large mileage in western Oregon. From Portland, Oreg. to Huntington the trunk highway parallels and is adjacent to the railroad all the way.
1467 So is The Dalles-California Highway. I spoke of the expenditure in the Deschutes Canyon. It goes along and parallels the Great Northern and the Southern Pacific all the way through the State to Klamath Falls and beyond.

There has been construction of State highways in this great central Oregon territory. You can drive on a perfectly fine State highway, not paved, but rocked and oiled—many people think they are driving on pavement—you can drive all over that country on it.

Q. From where to where? (2727.)

A. Well, you spoke of Klamath Falls. You can drive from Klamath Falls to Bend, and——

Q. Paralleling the Southern Pacific and Great Northern Railroad.

A. Well, I don't see your point there. That——

Q. Well, the point is, Governor, that you say we must have rail and transportation development, as I understand you, in this unsettled country commonly referred to as the great high desert in here. Now, are there any roads southeast from Bend, away from the rail transportation, any State highways?

A. You can drive on a perfectly good road up to—what is the name of that town?—Prineville, and on beyond Prineville and into the mountains.

Q. That is through the forested areas to the east. I am asking you about this country that is now related to be suffering for transportation and requiring the cross-State line. The red line through the map, through Exhibit 3, and on this map, indicates the center of it, and I am asking you whether there is a good straight highway north or south of it or parellel to it for an area in there for 150, 160, 170 miles?

A. Naturally, the demands upon the State for the construc-
1468 tion of the roads were in populous communities, and with forty-five hundred miles of road to build the more populous communities (2728) got the road first, and, as I stated a while ago, we have put in that country twenty per cent, approximately, more than their share, if you divide it on shares, account of the interest of the State in the road, and now, as I say——

By "that country" I mean the country east of the Cascades. We built last year here, you heard me state, 27 miles, and will build more the coming year. That 27 miles skirts along the south slope of the Blue Mountains from Bend to Burns, along a practically straight line. That is not all that has been built in that district; there has been other building along there, not by the State but I think the State has cooperated in other road building. I am not entirely familiar with road building. The commission handles it. I do not know what the program in contemplation is as to highways over in this central Oregon section. I do not know what the program is to build a road from Bend to Burns. It can not be done in a day. It is a considerable distance. Our funds are hampered and at present more or less in (2729) jeopardy. I am not familiar enough with it to say that I know of any other road construction that is contemplated over there.

I have been through that central Oregon country. I have driven down through that country in connection—I went as far south as Lakeview; and I have been to Burns. I have not been across the

country down into the adjoining country as far as Nevada. As to whether there has been much development in the State of Nevada in the last 20 years, I am not familiar with it at all. I have never been through there except on the railroad and have not been through there on the railroad for 15 or 20 years. I do not know how it compares in general topography and appearance to this so-called central Oregon desert country. (2730.)

1469 As to how business is routed from the western Oregon country, that is, traffic originating on the Southern Pacific line in western Oregon or on the Oregon Electric, I don't know enough about it to make a sworn statement in regard to it. If I can believe the press, why certain portions of that freight—that south of Eugene, say, takes a far greater mileage than it would if we had a cross-State line.

I know where Roseville is in California, near Sacramento. I imagine if it goes down through there and thence east to Odgen it is very much longer route than it would be via Portland and the Columbia River route. (2731.)

Marion County and Washington and Yamhill and Polk I think are the best western Oregon counties there are.

Q. And the greatest developed, probably the best productive soil, and the greatest population?

A. Well, I don't know about the greatest—the best soil in that. We have some advantages they haven't in the other counties south, but I think some of those counties are very productive counties. We have an advantage in lateral lines of railroad and highways, and things of that kind, that tends to bring about that result.

Comr. McMANAMY. Now, Governor, in the interest of getting the record straight with respect to this highway construction, you have a first class highway across from Eugene to Prineville and Bend up the McKenzie River, do you not?

A. Yes.

It doesn't parallel any railroad. We have a good highway from Medford to (2732) Klamath Falls via Crater Lake. That parallels no railroad. We have a good highway from Ashland to

1470 Klamath Falls that parallels no railroad. We have a good gravel highway from Pineville to Mitchell, and the John Day Highway from Ontario to Arlington only paralleling railroads for a part of the distances. The Fremont Highway, which leads down into the Lakeview country from Bend, may parallel a railroad part of the way. I have never been over that road. I don't know.

The highway from Bend straight across to Burns is developed to the extent that a stage line is operated over it, and I drove out over there a week (2733) ago Sunday, 149 miles, in four and three quarters hours.

There is a good highway from Willamette Valley from Eugene to central Oregon.

Comr. McMANAMY. And there is a good highway from the valley of the Rogue—two, in fact—to Klamath County?

A. Well, there is more than that. You can go to Klamath County from the Rogue over the Green Mountain road—that is out from Ashland—you can go by Crater Lake, and then you don't have to drop down to Klamath, you can go north from Crater Lake on into Bend.

Comr. McMANAMY. There are a number of cross lines from the Willamette and the Rogue and Umpqua Valleys to the Roosevelt Highway?

A. Yes; and others in course of construction.

Comr. McMANAMY. I have no more questions concerning the highway system. Will you, or do you care to, give any further expression to the needs of the eastern and central sections of the State for additional transportation facilities, which probably should include both highways and railroads?

A. I think there is a need for both highways and railroads. (2734.)

1471 Mr. SPENCER. The summary which the commissioner has made with you over this highway construction, Governor, is located entirely in western Oregon? If you treat a line extending from Sherman, at the mouth of the Deschutes River projected down through to Klamath Falls, if you consider all the territory between that line and the Pacific Ocean as western Oregon, the highway construction is in that district, isn't it?

A. I don't know just what you mean.

Q. Looking at the map there, Exhibit 3, I call your attention to the mouth of the Deschutes River at a place called Sherman, and I have projected a line all the way down the east slope at the foot of the Cascade Mountains to Klamath Falls. Now, all of the mileage that you have discussed in answer to the questions propounded by the commissioner is in that district, isn't it, except the John Day Highway?

A. The highway from Burns to Lakeview.

Q. Is there a highway from Burns to Lakeview?

A. Yes: a sort of one.

Q. Well, it is a jack-rabbit trail, with high centers, and with no State recognition, isn't it?

A. There is some construction there. There is also a highway (2735) from Lakeview to Klamath.

That is pretty near completed. It will be this fall. There is just a short road to let. (2736.)

Q. (By Mr. DEY.) Governor Patterson, I take it that you would not want to leave the impression here that the railroads operating in Oregon have carried on no development work or new construction within the last ten or twelve years in the State?

A. No. They have done a good deal of construction.

Q. Yes. The very expensive line to Coos Bay has been a very helpful thing, has it not?

Q. Yes, sir.

1472 Q. Costing some 14 or 16 million dollars. And within the last two or three years the Central Pacific, operated by the Southern Pacific, has spent some 20 millions of dollars in connecting up the Klamath Falls territory? You are familiar with that?

A. I am.

Q. And the Great Northern has extended from Bend down to Klamath Falls within the last year or so?

A. Yes.

Q. You are also familiar with the fact, are you not, Governor, that the Southern Pacific is now spending several million dollars more in building a line from Klamath Falls through Alturas, which will give a more direct route to the East?

A. I am.

Q. Now then, there is just one thing: It may have been cleared up but if it was I didn't catch it as it went into the record. (2737.) You spoke of a territory that contributes to the State highway fund about 20 per cent of the total, in which territory some 40 per cent of the highway fund has been expended, and by that territory you mean everything east of the summit of the Cascade Range, do you not?

A. Yes, sir.

Q. That is the entire eastern Oregon territory?

A. Yes.

My farm is 5 miles from the Oregon Electric line. That line runs southerly from Portland to Washington and Marion Counties touching Benton, Linn, and Lane Counties. The cross-State line would probably not be of any direct advantage to farmers who are served by the Oregon Electric line, at least those from Salem north, but I don't see how you can develop any part of Oregon
1473 without helping all parts of Oregon.

Q. So far as you are concerned, assuming that you can reach the Oregon Electric from your farm, you have a satisfactory (2738) route via the Oregon Electric to Portland and hence easterly via the Northern Pacific or Great Northern, have you not?

A. Yes.

Q. And that would be true of all of the territory served by the Oregon Electric until you get down toward Eugene, where something might be saved in mileage by a cross-State line; that is correct, is it not?

A. Yes.

Q. And the total distance from Portland to Eugene traversed by the Oregon Electric is about 125 miles, is it not?

A. Well, I assume that is correct. I don't know.

GEORGE W. BUCK thereupon resumed the witness stand and further testified as follows:

Redirect examination:

I was asked during the cross-examination whether or not I knew of any line that traversed an unproductive country when it was

built, and I referred to the construction through southern Idaho and the conditions obtaining there when I first went through that State. (2739.) There is not in my opinion any comparison in the central Oregon country with the southern Idaho country as to
1474 soil conditions or as to water conditions. I have not known of any construction across unproductive lands unless there was an objective that furnished traffic at each end. I can not conceive of any traffic for the bridge line here involved if it stopped at or near Crescent Lake. I have never considered that southwestern Idaho traffic as having any basis of going west.

Q. That banks right up against the Oregon Short Line main line, doesn't it?

A. It does; yes, sir.

Q. And is penetrated by branch lines connecting with the main line?

A. Yes.

Q. Now, you were asked whether if conditions as they obtained in 1905 or '06 could be restored, whether the gap across the State as it was referred to could be or probably (2739) would be constructed. What differences have taken place affecting the serving of the western Oregon country by railroad since 1906? I wish you would comment on rail lines that have been built that affect the business from western Oregon and also any other transportation agency that occurs to you.

A. Since that time the North Bank was built from Spokane to Portland and up the Deschutes River to Bend.

Q. By S. P. & S. you mean the Spokane, Portland & Seattle?

A. The Spokane, Portland & Seattle, the North Bank.

Q. I meant the North Bank.

Q. The North Bank, the Spokane, Portland & Seattle Railway, is that a competitor for Oregon and Portland business with the Oregon-Washington Railroad & Navigation Company?

A. It is. On eastern business, it being a joint property of the Great Northern and the Northern Pacific. We figure as to Chicago as a common eastern point. (2740.) I have always
1475 figured Chicago as the common eastern point for traffic, for all the lines in this territory.

Q. Do you know what connections the Northern lines have into the Colorado territory, or into the Texas territory, or into Missouri River?

A. They control the Chicago, Burlington—the old Burlington route. Also the Colorado & Southern, I think. The Panama Canal was built since this line was projected, which I understand greatly reduced the lumber shipments on the O. R. & N. to the East, lumber going through the Panama Canal. The Oregon Electric has been built since that time from Portland to Eugene, that being controlled by the Great Northern or Northern lines. On the east side of the Cascade Mountains the Oregon Trunk built up there and also the

Des Chutes Railroad to Bend. The Great Northern has built from Bend to a connection with the Southern Pacific line, with joint user to Klamath Falls. The Southern Pacific (2741) has built from Natron to Klamath Falls and rebuilt their line south from Klamath Falls. The Oregon, California & Eastern has built east from Klamath Falls to the Sprague River, and the Klamath Falls-Alturas line has started construction.

Exam. ROGERS. You will recall, Mr. Buck, that the only hypothesis I included in my question, as distinguished from the questions of Mr. Ellis and Mr. McCulloch, was if there was a merger or joint operation of the Southern Pacific and Union Pacific, in upclosing this gap.

A. You mean if they were merged again. My opinion would be that I would join it up. But that might not be practical from the demands of traffic. I mean from my standpoint as a railroad proposition. I don't claim to be an authority on the construction of railroads. That contemplates giving access to all of the traffic in western Oregon. (2742.)

Comr. MCMANAMY. Well, following that proposal, do you think that the fact that the Union Pacific and the Southern Pacific
1476 are either one or two systems would affect, either favorably or unfavorably, the interests of the public in transportation?

Mr. SPENCER. Oh, I object to a question of that kind being propounded the witness. I don't think that is a proper question. It involves a question for the commission to determine, a legal question for the courts to determine; and what his idea of public interest is in the matter it seems to me is an improper question, Mr. Commissioner.

Comr. MCMANAMY. I think I will have to overrule your objection, Mr. Spencer, because the commission is seeking all the information it can get.

Mr. SPENCER. Well, that is not information.

Comr. MCMANAMY. If this witness has an opinion on that we will be glad to have it. If he does not care to express his opinion he has the right of course to say so.

The WITNESS. I don't believe I will express any opinion on that. (2744.)

Recross-examination:

I made no statement or inference that this construction that I outlined as having taken place in recent years was all designed to substitute for the original intent of this cross-State line. As to whether it would serve any of the purposes intended to be served by the cross-State line all of it up the Deschutes River into the Klamath country, into the yellow pine belt, takes the place of it.

I would not say that none of it is a substitute, so far as the through transportation of transcontinental traffic from western Oregon eastbound, or traffic from southwestern Idaho and interior Oregon westbound to the Pacific coast. I would have to make a study of it before I could answer that question. I could not say as to whether

at the time the cross-State line was originally projected the traffic of all of western Oregon was moving east through the
1477 Portland gateway. Neither can I say as to whether it was the design of the carriers in proposing the cross-State line that all of the western Oregon (2744) traffic from Portland to the California line, should be handled over the cross-State line when destined east. At the time that this line was proposed they didn't even know whether they could build a line across the State. No one had ever gone over there and knew that they could build this line on reasonable grades. As to the whether it took long to find that out, it took about a year and a half. As to whether I know anything about the original intent as to the handling of the western Oregon traffic over this line, I stated quite a while back in my testimony that I came here from the East and did not know conditions on the west coast. As to the congested conditions, or fear of congested conditions, through the Portland terminal that existed at that time, I didn't come to Portland until 1909 and at that time my recollection was the O. R. & N. was carrying a heavy traffic of lumber to the East, but I was not interested in traffic (2745) statistics or conditions.

Q. As a matter of fact, in spite of this amount of construction of north and south line and of branch lines that you have mentioned, there has been no additional east and west transportation line constructed between Portland and Sacramento since the construction of the Union Pacific dowr the Columbia River?

A. Not in Oregon.

RHEA LUPER was thereupon produced as a witness on behalf of defendants, and, having been duly sworn, testified as follows:

Direct examination:

I am State engineer and secretary of the State reclamation commission. (2746.) The State reclamation commission is composed of the governor, secretary of state, and State treasurer, constituted under an act of the 1927 legislature. It took over the duties of the State desert land board and of the irrigation and drainage securities commission, and some added duties.

I am here in response to a subpœna and have brought with me the reports called for in the subpœna. (2747.) Those reports have been filed officially with the board. They are of public
1478 record.

Referring to the question in regard to the added duties or the real purpose for organizing the commission (2748) the irrigation and drainage securities commission consisted of five members, the governor, the State treasurer, the State engineer, the attorney general, and the superintendent of banks. The State desert land board consisted of the same men, except the superintendent of banks was not on it but the secretary of state was. As to the most serious problem confronting this commission with respect to irrigation districts not Federal irrigation districts: The irrigation law was enacted in 1917, and a number of districts were organized and issued bonds. Some of them had constructed their works,

the bonds had been sold after an investigation of the project and certification by the State irrigation and drainage securities commission: Then under the law the State could advance interest for the first five years, or guarantee interest on these bonds and the guaranty had been extended under contracts with many of the districts and some of them were over-capitalized and the debt was too high, put on there when the land values were high and they were (2749) unable to meet their obligations and this commission was authorized to try and bring about an adjustment between the creditors of these districts and the land owners, and it was also authorized to make examinations to bring out the facts on which such reorganizations could be worked out. When a district defaults, it is as badly involved, regardless of the amount of its debt. The Slide, the Ochoco, along the Snake River across from Weiser, Warm Springs, Deschutes Municipal, Crook County improvement district, Silver Lake, Summer Lake have all defaulted. Referring to report on the Warm Springs irrigation to the State reclamation commission, dated December, 1927, on page 68 the condition is as follows: "Desperate as is its financial condition, the district is not without (2750) 1479 tangible assets, by liquidation of which it perhaps may attain a degree of success impossible under present conditions, although this can be done only to the accompaniment of universal sacrifices." Is that the condition that district is in?

A. The Warm Springs district contains, according to that report, about 12,000 acres of excellent land, and about 5,000 more that will be able to pay irrigation charges. It originally was designed for 31,000 acres, and the debt and water was provided for 31,000.

It was built during the war, under a cost-plus contract, and when labor conditions were bad, so that the costs went up very much higher than originally estimated.

They developed a good water supply, but they did not have money enough to put in their drainage system, so instead of having 31,000 acres of irrigable land they only have 18,000 or 17,000. They had a surplus of water, and that was sold to the Vale irrigation project, to the United States Reclamation Service, adjoining, taking the water from the poor land in Warm Springs project and putting it on good bench land immediately adjoining.

So the entire water supply that was developed by this original bond issue will be used. The lands remaining in the district can't pay the entire debt, and there will have to be a portion of it written off before the district can be said to be in a sound financial condition. (2751.)

Q. But I asked the question, Mr. Luper, whether or not this report which you handed me correctly states the situation as I read it, on page 68?

A. Well, I thought I stated the conditions as I see it. I am secretary of the commission. That is not my report. That report was made by the United States Department of Agriculture and

the experiment station of the Oregon State College, and my work is sort of as executive secretary, and much of it is done under my direction.

1480 It is true that the district is in bad financial condition and that there will have to be some losses sustained by creditors. The report doesn't make an estimate of shrinkage, but unquestionably the bondholders will have to shrink their bonds. (2752.) I would not care to answer how much. I think it has already been publicly stated that the Ochoco bondholders had offered a settlement on the basis of fifty cents on the dollar, taking refunding bonds in exchange. With only the district back of the refunding bonds. That refunding has not been accomplished yet. Under this plan and under the district plan of irrigation upon which these different districts are based, the entire land, every acre of it, is liable for the debt. Every irrigable acre. The bonds are a general obligation of the district and a man can't pay his share of the total bonded debt of the district and obtain his release without the consent of the bondholders. Under the conditions I would not advise any settler (2753) to go out there and work it out and pay the full debt, until this readjustment is made. That is the problem as to all these districts. Summer Lake is the worst as far as the debt is concerned, per acre per settler.

Exam. ROGERS. Mr. Luper, I want to get the right impression about this. I know some of our railroads sometimes get in a difficult financial condition due to the way their finances are handled; some of them get in financial conditions that are difficult because there was not anything there to start with where the railroad was built. Now what is the situation of these irrigation projects? Is their financial condition due to the way they are financed or because the (2754) projects themselves were improper to start with, that there was not anything there to justify an irrigation project?

A. Well, as a general rule, the difficulty is almost entirely due to financing, too much debt, low estimates to begin with. For example, the Warm Springs started out to build a project with $550,000.

1481 They voted $550,000 in bonds and started work, didn't get through, and they voted some more bonds, still were not through, and they voted some more. After they started they had to complete or they didn't have any value from any part of their expenditure. So when they had a completed project they had a debt that was greater than they could pay, and then with the general obligation of the bond it demoralized the settlers. Each man was afraid he was going to have to pay the entire million and a half debt, and the result was that many people didn't make improvements on their land. While they are all farming now the good land, yet they are not farming it as well as they will later after the readjustments are accomplished.

Q. What percentage of these different districts, the area in them, is owned by the counties that they bid in for taxes? Is it very large?

A. It is large on the Warm Springs, because most of the poor land is now owned by the county; about forty per cent. It is less on the Ochoco.

If the bondholders do reach a settlement (2755) I expect these projects to continue operating, and they will be of course much more successful and productive.

Cross-examination:

If reasonable rearrangements with the bondholders of the securities of these various districts can be effected, in my judgment, settlement of farmers thereon and the development of the latent resources of those districts can be successfully carried out. In my opinion there is nothing in prospect for the holders of the securities of these existing projects if they refuse to enter into reasonable financial arrangements, or rearrangements and scale down the indebtedness against these projects that now exist. In view of the alterna-
1482 tive of getting nothing or of making some reasonable readjustment of these obligations, in my opinion, the prospect for effecting these financial rearrangements that the board is trying to work out is almost certain, in a way, because I can't conceive of men staying out of an organization and blocking it indefinitely. (2756.) As to whether we have made satisfactory progress toward that end during the recent work of this new board, I will say that my experience in dealing with bondholders is that they are very fair. Sometimes they don't understand the situation, but my experience has been there have been only one or two refusals. I think additional railroad transportation through the center of the State of Oregon would increase the value of their land and a demand for it and give the farmers additional profits on their products. They could grow other things. I think it would increase the extent to which the land is utilized.

Redirect examination:

I think we had better clean our slate first before we build any more immigration projects.

I have never made a study of the prospect in the west end of Christmas Lake Valley, known as Fort Rock (2757) Valley. I have considerable data in the office about that proposed project.

WILIAM G. IDE was thereupon produced as a witness on behalf of defendants, and, having been duly sworn, testified as follows:

Direct examination:

I am here in response to a subpœna. I am the manager of the Oregon State Chamber of Commerce and our major activity for the last four years has been placing settlers upon our unoccupied lands. We have been operating jointly with the land settlement committee of the Portland Chamber of Commerce, composed of representative businens men of Portland. (2758.)

1483 I know something about the irrigation districts in central and eastern Oregon. I have been in touch with Commissioner Mead, as a representative of the State in that connection.

When we first began the work we made an attempt to put a few settlers on the Ochoco but after a little more careful investigation we decided not to continue that work, and we have not made any effort for the last three years to put any settlers on it.

I would not put any settlers on any of the irrigation districts referred to by Mr. Luper until there has been an adjustment of the bond situation (2759), the financial condition.

There are other irrigation districts in the State that are directly accessible to transportation that are not settled. I have put settlers on the Klamath proposition in Lake and Klamath Counties, the Westland district in Umtilla County, the central Oregon irrigation district in the Bend district and there are a number of smaller districts in central Oregon I believe we would be willing to put settlers on where they have no bonded indebtedness and are not in default, and where there is no general lien upon the whole project, so that a settler can pay out his obligation and get title to his property. The central Oregon irrigation district has no bonded indebtedness. It is near Redmond and runs down east of Bend. There is a Powell Butte that is all right. It is between Redmond and (2760) Prineville. None of those districts are fully developed and settled; they all lie adjacent to existing lines of railways. I would not think we need any more irrigation districts developed until we have settled what we already have.

The big problem of agriculture is marketing.

Exam. ROGERS. Do you mean there is no occasion for these irrigation projects, if they were not in financial difficulties, being put into operation, even though their financial difficulties are overcome?

1484 A. Oh, no; they are all right. Fundamentally the projects are all right. They were rather carelessly organized and financed, and the obligations were made without regard to the productivity of the land, and many marginal lands were taken in that should have been eliminated, and things of that kind.

Exam. ROGERS. I didn't know whether in your answer to Mr. Spencer about some of these projects that are now working (2761) not being fully settled, whether you thought there was not any occasion——

A. Oh, no; it is just because we have not been successful in getting the settlers. We are trying to get settlers for them all the time.

The first problem is to settle the districts, that are on a financially sound basis. Then the next problem is to work out some financial settlement with the bondholders and the State for these irrigations that are mentioned as financially distressed by Mr. Luper. Those are all districts where the works were built, canals were built and the water was put on the land. (2762.) There is some additional land that might be brought in, I assume. There is another set of districts that are not bonded yet. Take for instance the Harney Valley district of 60,000 to 80,000 acres. The bonds are authorized but none issued; and no works constructed.

Q. I am wondering whether there is any necessity of going in there under existing conditions, with the problems you have, to open that up—that is just an illustration—and settle it?

A. I think that is rather a large question for me to answer, Mr. Spencer. I personally think we should settle the districts we already have in existence.

As to how long it is going to take: That depends of course upon the advance that agriculture makes and the movement to the Pacific Northwest. You know what we have done since we have been here.

We have several years' hard work ahead of us on the (2763)
1485 material we have. I should say it would take five to ten years at least.

Cross-examination:

In considering these problems, I took into account the Vale and Owyhee projects that the Government is now building. I don't think anybody knows to what extent they are colonized. They have received a great deal of favorable advertising. There is a great deal of inquiry but no land will be available for settlement before 1930. The financial difficulties I have mentioned have no connection with the Vale and Owyhee projects. (2764.) As to what extent transportation entered into the question, we are interested in colonizing districts of course that have transportation facilities available at the present time. It is much more difficult to secure settlers who are willing to go in the frontier like and a long ways from transportation. As to the necessity of transportation preceding the colonization, I think the building of new railways always develops more or less new business that would not be developed otherwise. Under the present situation it is almost impossible to colonize districts not within reasonable reach of railroad transportation.

I think it would be a very difficult matter to successfully develop these irrigation districts that Mr. Luper spoke of without rail transportation, irrespective of their present financial difficulties. (2765.) When there has been a sufficient demand for agricultural lands, I think they could be successfully developed with rail transportation, leaving their financial difficulties out of the question.

The Oregon State Chamber of Commerce and the land settlement committee of the Portland Chamber of Commerce are interested in the development of the agricultural and other resources of the State through efforts to obtain additional rail transportation where it is

not now provided. We are interested in all matters of state-
1486 wide development. I have never given any study to the question of whether this proposed cross-State line from Crane to Crescent Lake would contribute to the development of the State of Oregon and don't feel that I am a competent witness.

Redirect examination:

In my work of land settlement, have had cooperation from (2766) the railroad companies operating in Oregon. I have had very help-

ful cooperation from the immigration departments of all the railways serving this State, and continue to receive it. They seem to be as anxious to settle these lands as we are.

I tell prospective settlers that certain fruits can be raised very profitably in the Willamette Valley. I tell them it is more hazardous to grow certain kinds than it is others. For instance, we have two or three very well developed (2767) apple growing districts where they have marketing associations among the farmers, where everyone sprays and they take care of the orchards and they produce a very high-class fruit.

In the Willamette Valley there is a lack of associations of that kind, and while one man might take excellent care of his orchard, the next man to him might not and he would be subject to all the diseases that developed from the careless man and it would be a hazardous undertaking for him.

The situation for pears and prunes is better. Pears have furnished a profitable crop during the past several years. Prunes have been a pretty bad crop for the past four or five years, because marketing conditions have not been good. But prune growers, in the business for 20 years, tell me that over a period of years, year in and year out, they consider it a fairly profitable crop.

I have been in this particular work for nearly five years but in colonization business for 20 years. (2768.) I came here in
1487 1908 as the colonization agent for the Canadian Pacific Railroad, but up to that time I was selling Canadian land to Oregonians. After I came here in 1908 I was colonization agent for the Canadian Pacific agent. In 1914 I became interested in Oregon settlement. I was in the colonization business on my own account. I know about the people who took up some of the dry country in central Oregon settlements. I did not induce them to settle there and I would not. I would not advise a man to go into central Oregon to do dry farming, except under favorable considerations, where he might be located on a running stream of water or have a spring available, or something of that kind, to produce his winter feed. (2769.) As to whether there is anything else down there that would influence settlers in going into central Oregon, along the line of this proposed road, where is some very good territory in central Oregon. I think the Burns country might be developed, and there are certain locations over there that could be developed all right. But, generally speaking, for instance I might say this, to show you our attitude: There are 13,000,000 acres of United State lands subject to homestead, the greater part of it lying on the high desert in eastern Oregon, and I get hundreds of inquiries from people for Government lands. I have a specially prepared circular that I send to every one of them, in which I specifically advise them that it is not the right thing to do to try to go over there and try to make a living; that they can't do it without irrigation and there is no irrigation available in most of that territory.

In some districts there are possibilities of subterranean water and pumping. The State made an appropriation a few years ago to develop some experimental wells in certain portions of central Oregon and put down those wells and there never has been but one of them used. The man over there has been using that well pumping with a Diesel engine and making a living, I guess. (2770.) I refer to John Ernst. I don't know whether he helps out with bounties.

Prunes are mostly marketed dried in the Willamette Val-
1488 ley. They raise mostly Bartlett pears and they are mostly handled by the canneries. (2771.)

Exam. ROGERS. Well, perhaps I didn't understand exactly what you were getting at. There has been some testimony here that the fruits of the Willamette Valley, the apples, pears, prunes, were of a kind that could not be suitably shipped east fresh.

A. I don't know whether it could be said that they could not be suitably shipped fresh, but it is a fact that they do not ship as well as fresh prunes—for instance, as these raised in eastern Oregon; nor do the pears ship as well as those raised in the Rogue River Valley. But I would not say that you could not ship them fresh under certain circumstances, profitably.

I don't think the apples of the Willamette Valley have as good shipping qualities as the apples raised in a dryer country, in higher altitude. (2772.)

GEORGE F. CORNWALL, was thereupon produced as a witness on behalf of defendants, and, having first been duly sworn, testified as follows:

Direct examination:

I am here in response to subpœna. I am publisher of a commercial paper called "The Timberman." It was established in 1899, by my father. The territory of the Rocky Mountains, including Montana, Idaho, Oregon, Washington, California, British Columbia, Nevada, Arizona, New Mexico, Colorado, and Utah are embraced in the discussions in The Timberman. In the preparation of the data published in that periodical, we inform ourselves as to the timber stand (2737), supply, and markets, and kindred questions that are associated with the lumber industry in the United States.

At your (Mr. Spencer's) request I prepared a statement and summary involving different questions with respect to this lumber industry in the Pacific Northwest.

1489 (Said statement was thereupon received in evidence, marked "Defendant's Exhibit No. 53, Witness Cornwall.")

In explanation of the statement, the following questions were asked.

Q. The first table, entitled "Oregon softwood production," that is a thousand feet, as set forth in that table?

A. It is.

Q. Of the Douglas fir, pine, and other species, and the number of mills, in different years. The same information contained under the heading of "Washington softwood production," in the State of Washington, over the years there presented? (2774.)

A. Yes.

Q. And Idaho?

A. In the same manner; yes.

Q. And the table headed "Export domestic, waterborne shipments" what does that purport to show?

A. That shows the combined movement of lumber by vessel for the years 1920 to 1926, inclusive, from the States of Oregon and Washington. It also shows the markets served, both the domestic and foreign.

Q. The Atlantic coast referred to there in one item, is that timber that moves through the canal and is delivered to the Atlantic coast ports?

A. Yes.

Q. The Gulf ports, "The Gulf ports" is there in the same way?

A. Yes, sir.

Q. And the "percentages in the table of rail and water shipments," I guess it is self-explanatory. The first column "Rail" and the second column "Water" indicates the percentages that were moved in the years, water and rail, respectively?

A. Yes.

1490 Q. I would ask you, Mr. Cornwall, whether these percentages appearing under this particular table of rail and water shipments includes the lumber that is shipped to California by water? (2775.)

A. Yes, it does.

Q. Now, this heading on page 3, has there been any failure on the part of the railroads serving these three States to move the lumber in question tendered them for shipment with reasonable dispatch during the period since 1922?

A. The railroad service since 1923 has been, for the most part, satisfactory to the mills.

Q. And the next there, Nos. 6 and 7, show the mills and their location and capacity in thousand feet board measure in the States of Oregon, Washington, and Idaho, established since 1922?

A. That is correct.

Q. And the next table, No. 8, the new sawmills under construction in 1928, and capacity and location?

A. That is correct.

Q. Now, this 9 and 10, the names of the companies with sawmills projected in the different locations—do you know how far advanced or what stage of assurance obtains with respect to those different mills? The Kaskela Mill, for instance, is on the Deschutes River, isn't it?

A. Yes, that is in the Deschutes country, in the Warm Springs timber.

Q. Yes; do you know whether there is any assurance that that operation will——

A. Nothing more than they have a bond posted, I understand with the Government party selling the timber, and the conditions (2776) of the contract must be carried out within a reasonable time or it will be forfeited, as I understand it.

Q. And The Dalles, Oregon, that is the old Heimrick operation, Fairchild and associates?

1491 A. Well, that is still in process of incubation, as it were.

Q. What about Boutin of Lakeview?

A. Mr. Boutin owns substantial acres of timber in the Lakeview district and is preparing to establish a mill. It may be slightly over the Oregon line into California, but it is in the Lakeview district.

Q. And the operating capacity as of July 15, 1928, you say is about——

A. 75 per cent, it shows here.

Q. That is, you mean by that that the mills that are operating operate about 75 per cent of that capacity; is that right?

A. Well, I may have to amend this slightly, Mr. Spencer. According to the West Coast Lumberman's Association records of identical mills' cutting for the same period as last show a record of about 6 per cent, but there are a great many mills outside of the association which are not running, and it may be—I rather think the 75 per cent is still very close. (2777.)

Exam. ROGERS. What is this 75 per cent?

A. About 75 per cent of the potential capacity of plants that are in shape to run.

Exam. ROGERS. I don't yet understand it. Is that capacity or output or what?

A. Well, I assume this question that was asked by Mr. Spencer was more in the nature of capacity.

Mr. SPENCER. The question was to what percentage of capacity are the lumber mills in Oregon, Washington, and Idaho operating at the present time. Now, are they operating seventy per cent of the capacity of the mills?

A. I would say they were; yes.

Exam. ROGERS. That is 25 per cent below capacity?

A. Yes.

1492 Mr. SPENCER. You mean by that a one-shift stretch for a mill, or two shifts, or three? Very few of them operate more than two shifts, do they?

A. No; two shifts is—with very few exceptions, two shifts is the——

Q. The limit?

A. The rule, or the limit.

Q. Are they based on one shift, your estimate here?

A. No; I tried to give a picture of the production as a whole, that is, with respect to normal for the year, and as near as I could ascer-

tain it appeared to me that they were (2778) operating about three-quarters the normal rated capacity.

Q. Well, there are so many mills shut down, I was wondering how that could be 75 per cent capacity, if you count more than one shift.

A. Well, I think, Mr. Spencer, a large part of the mills that are down are of relatively small capacity.

I think the Grays Harbor Lumber Company is running again. The mills are large for the most part.

Q. Now, you take the capacity here is indicated on sheet 3 under Nos. 6 and 7; is that right?

A. Yes.

Q. Well, that is an 8-hour shift, isn't it? Take the St. Paul and Tacoma Lumber Company, Tacoma, Washington, 100,000 feet daily capacity—they have more than that with two shifts, don't they?

A. Yes; they would. These are on single-shift basis.

Q. And your answer to No. 11 would be on a single-shift basis?

A. Yes; I believe it would.

Q. Now, the mills shut down or suspended since January 1st, 1922—any comment you want to make on that? Page 5.

1493 A. With one or two exceptions (2779), most of these mills have permanently closed or burned. There are some on here that have been shut down for an indefinite time, but they may resume at any moment. For instance, the Peninsula Lumber Company, the last item on the list, is in shape to run most any time.

I think their trouble was largely financing.

The first one to close down, the C. & O. Lumber Company at Brookings, Oreg., was abandoned on account of lack of suitable transportation. The only market they had was California and a rather uncertain harbor. They are not on a railroad.

The Coos Bay Lumber Company has been involved in some financial difficulties, and they have shut down one of their units, known as Mill B.

E. E. Johnson, at Coquille, is shut down from financial difficulties.

The North Pacific Lumber Company became obsolete. (2781.) The plant became unprofitable. It would have required a very large investment to put it in shape; to modernize it.

The Dollar-Portland Lumber Company is somewhat in the same position, although it is in strong financial hands and could be operated if the owners so chose.

The Coast Range Lumber Company at Mable is in the same general ownership as the Dollar-Portland Lumber Company.

The Nickle Mills became involved in financial difficulties. By "financial difficulties" it is rather difficult to say whether through these difficulties, they wouldn't operate even though there was a good market. (2782.)

1494 The Wind River Lumber Company at Cascade Locks, as I recall that, a large investment in the mill was made and the amount of timber was miscalculated, and when it was found

that the amount of timber on hand would not liquidate the investment they scrapped the mill and took their loss.

The Beaver-Linton Lumber Company, at Portland, is having some difficulties owing to the market and other factors.

The Great Northern Lumber Company at Leavenworth, Wash., has been in more or less trouble for some years, and they are liquidating that.

The same applies to the Puget Sound Mills and Shingle Company, the Siler Mill Company, the Clear Lake Lumber Company.

The National Lumber and Manufacturing Company burned.

The Union Mill and Shipper Company at Union Mills, the owner of that died, and the heirs were anxious to liquidate it.

The Perry-Baker, at Everett, was dismantled and moved to Empire, Oregon.

By "liquidated" I mean the owners have decided not to operate any farther and have sold off the equipment. (2783.) In some instances they sell the plant as it is to some other operator, if there is timber available. Sometimes they are leased to other people, who buy timber on the open market.

The Menefee Lumber Company, at Ranier, burned.

The Kalama Lumber and Shingle Company, at Kalama, that burned.

The Snow Lumber and Shingle Company, at Littell, and the Leban Mills and Timber Company, the McCormick Lumber Company, the Globe have shut down, largely from financial difficulties.

The Winton Lumber Company, of St. Joe, Idaho, has been shut down, not from financial difficulties, but because largely the plant has not been economical to operate. It is in strong financial hands.

The Case Shingle and Lumber Company got down from financial causes.

1495 Rucker Brothers cut out their timber.

Klebb Lumber Company, at South Bend, was built without any timber, and after the mill was completed they found no timber supply and it was never able to run.

Jamestown-Oregon Lumber Company at Monroe was promoted shortly after the war and built at a very large expense, far (2784) more than it should have cost. The stockholders for that reason have not been able to make it pay. It has only run at one or two intermittent periods.

The Brighton Mills Company, at Brighton, Oreg., suspended chiefly from lack of timber, and also some financial difficulties.

Oregon Silver Spruce Company suspended on account of financial troubles.

The Hammond Lumber Company, at Astoria, burned.

The White Pine Box and Lumber Company, La Grande, and the Minam Lumber Company, at Minam, Oregon—I am not able to say just what caused those there, either of those two.

J. B. Kelly Lumber Company mill at Warrenton was burned.

The Peshastin Lumber and Box Company—I am unable to give the cause of that suspension nor of the Deschutes River Lumber Company.

Lindstrom-Handforth, at Rainier, burned.

Siuslaw Mill Company, at Tiernan, was shut down chiefly on account of the market, I understand.

The Wait Mill and Timber Company, at Granite Falls, was cut out.

The Washington Fir Lumber Company, Winlock—I can't say as to that one.

The Puget Sound Lumber and Box Company became involved in financial difficulties. (2785.)

The Oregon Box and Manufacturing Company burned. The Neff Lumber Company, at Aberdeen, went into a receivership.

1496 The W. H. Eccles Lumber Company, at Baker, was moved over into Idaho, and it has since changed hands.

The Peninsula Lumber Company, at Portland, has shut down on account of some financial difficulties. I think financial difficulties would involve the market to some extent.

(By Mr. SPENCER.) I would like to have that cleared up, if there is any question about it. I have checked here, besides the mills that burned, the following mills which from your statement apparently are dismantled or so obsolete that they couldn't operate: The North Pacific Lumber. The Wind River Lumber Company?

A. Well, I think the last was a miscalculation on the timber supply, which was responsible for the cessation of that operation. They spent a lot of money repairing it. (2786.) They couldn't operate it. The equipment has been sold and moved away.

Q. You so classify the Ferry-Baker Lumber Company, at Everett?

A. Part of the equipment has been moved out.

The Kleeb Lumber Company, at South Bend, is still there intact and could run.

The Eccles Lumber Company, at Baker, has been removed.

Q. Are there any of the others in that list that are in such condition as to operate if the market conditions justify it?

A. Do you mean by that that you want me to point out those that are in a position to operate if conditions were deemed satisfactory by the owners?

Q. Yes, assume they have got the working capital, and the owners are in shape to go ahead and the market justifies it?

Exam. ROGERS. Now, before you answer that, can you tell us which of them are shut down because the markets are not such as to make it possible for them to run?

A. Yes, Silverton Lumber Company. The Coos Bay Lumber Company, mill B; E. E. Johnson (2787), Mickle Mills,

1497 Beaver-Linnton, the Puget Sound Sawmills & Shingle Company, the Snow Lumber and Shingle Company, Winton Lumber Company, Kleeb Lumber Company, Jamestown-Oregon, Siuslaw Mill, Neff Lumber Company, W. H. Eccles Lumber Company,

Peninsula Lumber Company are in shape to run if the owners deem conditions right.

I understand the Dollar-Portland Lumber Company, at Portland, is in rather bad physical condition from not being kept in repair for the last several years, although the machinery is intact and could be made to operate with quite an expenditure. It hasn't been dismantled.

As to how many of these operations have been down more than a year: The Peninsula is rather recent. (2788.) Eccles is recent. Neff is recent. The Siuslaw Mill Company, Oregon Silver Spruce, Puget Sound Sawmill and Shingle Company, the Great Northern, Beaver-Linnton, Mickle, E. E. Johnson, Coos Bay Lumber Company, Mill B; those are within the last year or two, as close as I can recall them.

As to how we got this information: We have news sources; there are happenings that we had recorded from time to time and some from personal contact.

As to whether the supply of softwood lumber in the United States has been in excess of the demand for the past five or six years, it is rather a debatable question. We know that the cut has been large and the prices as a whole slightly weak, but the entire supply has moved into consumption. It is difficult to say whether a profitable operation or otherwise unless you segregated the different districts. I would say that the southern pine industry has made money on account of the favorable conditions (2789), being close to market, and things of that nature; and some of the mills out here that have owned their own timber and have logged and milled efficiently have made some profit (2790).

1498 Profits, as a whole in the fir belt, I presume would be deemed unsatisfactory, but I know of cases personally where the mills have operated at a reasonable profit. I think you would hear more complaint than satisfaction with the condition of the industry as a whole. There is a minority of the mills that have made some money and the majority of them have not.

Judging from the comments they make to us of the market conditions, I would say the same applied to the pine belt.

As to whether lumber manufacturing business has been in a depressed condition during recent years and its present condition, I answered that by saying that heavy production has caused a weakening in lumber prices during recent (2791) years, demand, however, has not absorbed the cut—that should read "has absorbed the cut," due in part to phenomenally large construction programs throughout the country. At present, values are firmer and this in the face of less building throughout the consuming markets. Curtailment of output accounts for part of the present market strength.

Mr. Spencer asked me two or three weeks ago to answer some general questions pertaining to the lumber industry and these are the facts as I saw them. This includes my father's and other people's

judgment altho I didn't consult anybody specifically but in obtaining the information I made some inquiry and investigation. (2792.)

As to southern pine production, there has been some complaint about business. The volume is 11,000,000,000 feet.

Q. And your observations in the following numbers there pertain to the Southern Pacific operation, do they?

A. Yes, sir.

Q. The last page is detail, given by States, of southern pine production?

A. Yes, sir.

Q. Item No. 24; is that right?

1499 A. Yes.

Q. Let's see; that is the year 1926.

A. 1926. That is the segregation of the general figure under (2793) 1926 and item 20; those will be found to check.

Items 25 and 26 cover the consumption of softwood lumber annually in the United States for the years 1920 to 1926, inclusive. It does not include the lumber that is shipped offshore. By offshore I would assume that you mean foreign markets. But it does include that which moves to Gulf and Atlantic seaboard and California.

Q. And you distribute that in Table No. 27?

A. 27. That includes hardwoods, because I had no information that segregated them.

Mr. McCulloch. Mr. Spencer, could you file for the record a list of the questions to which these numbers 1 to 28 are answers? There are some of them that don't seem to be intelligible without the questions. At the top of page 7, for example, No. 18, the answer is "yes; when built to safeguard owner's timber investments or to salvage timber in jeopardy from a variety of causes." (2794.)

I will give you question 18: "In your opinion, will the interests of these States or of the United States, or of individuals as owners of timberlands in these States, be served to advantage by the construction in the near future of mills of substantial capacity for the manufacture of lumber?" Now, you answered that, "Yes; when built to safeguard owners' timber investments or to salvage timber in jeopardy from a variety of causes." But otherwise what would be the fact?

A. Under present conditions there is ample sawmill capacity in the United States to take care of the demand, I would say. But new mills may be built where present plants are obsolete, or where timber is in jeopardy from beetle, such as it is in the Klamath

1500 section and in certain districts, or where the increasing tax burden in the county has become unbearable to the owners. (2795.)

(Thereupon the copy of questions so offered and received were attached to and made part of "Defendants' Exhibit No. 53, Witness Cornwall.")

Cross-examination:

As to the present practice of purchasers or jobbers of lumber, dealers in the Middle West and East, as compared (2796) with a few years ago: There has been some tendency in recent years toward buying from hand to mouth; in other words, not stocking up as largely as they used to do in the spring and fall. I can not say as to whether that tendency has had any effect on the mills of the Pacific coast located more distant from those markets.

Time in transit is a factor in enabling the mills of the Pacific coast to compete with other producing sections in those markets of the Middle West and East that buy in small quantities for immediate use.

Q. Is it reasonable to assume from that fact, from the condition, and the circumstances you have described, that the distance of western Oregon producers from the markets of the Middle West and East may have been one of the principal factors causing their financial difficulties?

Mr. SPENCER. I didn't ask the witness anything about that one direct. I don't know whether he is qualified to talk about it or not.

Mr. ELLIS. Well, he has testified a great deal about the financial difficulties of the miller, of the sawmill operators. (2797.)

The WITNESS. I don't think I am qualified to answer that.

Exam. ROGERS. I thought you said, Mr. Witness, that one of the advantages that the southern producer had was that he was closer to the market. Didn't you say that?

A. I did. I believe my answer would be "yes" to that. That question became rather involved and I presume I got lost.

1501 Q. What did you have in mind in answering question No. 5, which is as follows: "Has there been any failure on the part of the railroads serving these three States to move the lumber in question tendered to them for shipment with reasonable dispatch during this period since 1922?" to which you answered, "Railroad service since 1923 has handled tonnage offered at reasonable dispatch."?

A. I meant by that, that the time in transit has been short, and, as far as I know, there have been no complaints on account of car shortage. My answer was intended to be general in character and applying to all of the Pacific Coast States. I did not intend that it should be construed as applying particularly to any local conditions that might exist in western Oregon. (2798.)

I can't say exactly how long it takes to move lumber from western Oregon to Mississippi River points. I know of one shipment made from Portland, a special item, sent to Chicago from this city, in five days. That was a special item that was attached on to a fruit express train. And I also have heard of instances of deliveries made in Colorado in six days under, you might say, ordinary conditions. I could not say what the ordinary time is, except that it is considered by the lumbermen to be a great deal shorter than it was five or ten

years ago. In a great many cases time in transit has been cut in two. A representative of the Hallick & Howard Lumber Company of Denver was in my office yesterday and said that he is now receiving shipments in ten days to Denver, and that five or ten years ago it was not unusual for that same shipment to take (2799) six weeks. My answer to this circular is not based on that information. There have been no complaints, as far as I know, of car shortage, offered at any of the meetings of lumbermen I attend, and it has been the general opinion that the shortening of time in transit has caused a totally different type of buying. In other words, the buying is distributed throughout the year instead of coming at seasons
1502 as it used to. This is attributed by lumbermen largely due to the faster handling on the railroad.

Q. In answer to question No. 15 you conclude by saying, "Well located plants with good timber and efficient management have shown a fair profit." Where are these plants that have shown a fair profit principally located?

A. There are three in the city of Portland that show a healthy balance sheet every year, and have for a great many years past; and the mills at Bend, and several at Klamath Falls, and one at McCloud have been profitable institutions through most conditions.

Q. Is it not a fact that all of these mills that you have listed as showing a profit are mills located on tidewater, or where competitive rail service exists? (2800.)

A. Not in the case of one I have in mind in northern California, McCloud River Lumber Company. It is cutting the same class of timber and is exactly the same as the mills in Klamath Falls, to all intents and purposes. As to any in Oregon or Washington I would class with the McCloud Lumber Company, I would place the Shevlin-Hixon Company at Bend in the same category. It is owned by the same people. They have competitive rail service there.

As to whether I know of any that are located at points served exclusively by the Southern Pacific Company in western Oregon and having no water transportation available that have operated at a fair profit, I haven't access to their statements. I arrived at the fact that they operated at a fair profit merely from what they tell me. There are a number of well located plants, with good timber supply and efficient management, on the lines of the Southern Pacific Company in western Oregon. (2801.)

I am not certain as to the present status of the Siuslaw Lumber Company. I understood it was shut down at the time this list was made up. I would not be surprised if that mill had been shut down for the past five years instead of the last two. This list purports to read from January 1st, 1922.

1503 Q. Do lumber manufacturers in Oregon and Washington, as you have come into contact with them, regard as desirable the use of the shortest routes in reaching markets, and the routes that will enable them to get into consuming markets in the quickest time?

A. I have never heard any discussion of that.

Exam. ROGERS. Have you ever heard it discussed, in view of this changed method of buying and carrying smaller stocks, that it was desirable to have quicker deliveries? (2802.)

A. No; I can't say that I have.

I do not assist in any way in the location of new mills coming into the territory. As to whether there is any difference in the tendency of mills to locate in a place where there is only one line of railroad as compared with two or more, that would depend somewhat on the character of the timber they had in mind. We have the case of the Pacific Spruce Company, at Toledo, Oregon, which purchased one of the wartime properties because it had a very exceptional stand of spruce, high-grade spruce, and some excellent fir. That choice I think was made on account of the excellence of the timber rather than transportation.

It would have to be high-grade pine, such as found in the Klamath district, before the one or two or three lines would make any difference. Mills have gone in the Klamath district without regard particularly to the competitive rail situation.

A large part of the desirable Douglas fir timber (2803) has been adjacent to tidewater. They have in a great many cases enjoyed the benefit of water transportation. It is very desirable in the Douglas fir region. As to what difference it makes with regard to fir, whether they have one road or two in the location of the mill, if they have no water I would say it would be desirable to have more than one line so that it could reach different markets.

Hemlock is a wood that is probably used largely for pulp and paper. I have never heard of anybody building a mill
1504 specifically to cut hemlock. It has been regarded as sort of a drug on the market, although a very valuable wood.

Pine is an inland species. You can't consider water transportation there. It would be desirable I think in most cases to have more than one road (2804), for wider distribution of market. Possibly it would bring improved service in the matter of cars in times of shortage.

Cedar does not grow in pure stands. It is usually a by-product of some other form of logging, with the possible exception of the white cedar of the Coos Bay district. That is profitable enough to be logged separately. The largest part of that is exported.

Redirect examination:

Q. Wherein is any mill located on the Southern Pacific lines in western Oregon, and exclusively so located, limited as to distribution of markets because it is on one railroad only? The Portland gateway is open?

A. Yes, sir.

Q. And joint through rates with all the Northern lines, is it not? (2805.)

A. That is correct.

Q. And with the Union Pacific?

A. Yes.

Q. And then of course south through whatever gateway exists. There is an absolute freedom for these lumber shippers out here on the coast, isn't there, or in western Oregon, so far as gateways are concerned?

A. Yes; that is true.

Q. Now then, with respect to being located, in answer to a question asked you by Mr. Ellis, you say that the McCloud River Lumber Company has been able to operate profitably at McCloud, Calif.?

A. Yes.

1505 Q. You say that the Klamath Mills have been able to operate profitably?

A. Yes; most of them.

Q. And it is a fact that they have been on one railroad only, all of these years, until the last three months?

A. That is correct.

Q. Now tell us a single mill in western Washington that is not on tidewater, and regardless of the number of railroads it is served by, that has operated profitably in the last few years; a fir mill? Either Oregon or Washington. (2806.)

A. I would say that Inman-Poulsen has made money. They are on tidewater and served by all the railroads that enter Portland. I can't name a single fir mill in either Oregon or Washington not on tidewater that has been very proud of their record, whether it has one railroad or four, offhand. It is true that old-established institutions, like the Peninsula Lumber Company, with access to all of the railroads in Portland and with tidewater, have been unable to make it go. It is a mill without timber for one thing. Maybe that is one of its handicaps. It has had access to the Willamette and Columbia River (2807) log markets. Many of those mills are buying logs right along in that market. Otherwise there would not be any log market.

Recross-examination:

If I were going into the business of manufacturing fir lumber, with my knowledge, and made an investment in a mill, if it were a fir operation I would want tidewater first of all and then railroads would come next; if I didn't have tidewater, two or more railroads would be preferable.

Q. And last of all you would choose a location where it (2808) was served by only one railroad, or would you choose such a location to go into the manufacturing business at all, before you had

1506 made an investment? If you had a quarter of a million dollars to invest and you wanted to go into the lumber manufacturing business and manufacture fir lumber, would you consider investing your money at all to manufacture fir lumber, if you could not get on tidewater, or if you had to locate at an interior point served by only one railroad?

A. That might be governed somewhat by the price at which the timber was offered, and the condition of the ground to log on, and a number of factors. Ordinarily I would prefer the tidewater, with other means of transportation. But there might be cases where that other form of investment might work out all right, if everything were cheap enough.

Q. If you were a manufacturer of fir lumber, would you deem it in your interest to use the shortest rail routes to consuming markets, assuming you were an interior mill and could not ship by water, and the route that would afford you the quickest time in transit for your products?

A. I think the average lumberman would be more interested in the rate he pays than a few miles, more or less, that the traffic would travel. But if he were seeking some particular form of service he might want it to go as direct as possible.

Leaving the rate question out, since (2809) there is the same rate from a very large area of origin to any particular destination in the East, if I were manufacturing fir lumber at an interior point where I could not ship by water, with the information and knowledge I have, it would be preferable to use the shortest rail route to get my products to market and the route over which I could get the quickest time in transit.

Redirect examination:

If I had an interior mill and two railroads and all my shipments went to Chicago and one of the railroads was 200 miles longer,
1507 I would not give all the business to the shorter line. I think it would be a good idea to divide up the business. I think your service would be improved in both respects. (2810.)

H. E. Lounsbury was thereupon produced as a witness on behalf of defendants, and, having been duly sworn, testified as follows:

Direct examination:

I am general freight agent of the Oregon-Washington Railroad & Navigation Company. My railroad employment dates back to 1887, when I entered the service of the Oregon Railway & Navigation Company and in 1891 obtained employment with the Southern Pacific Company in the general manager's office where I was employed until 1895, when I was transferred to the traffic department of the Southern Pacific Company Oregon lines. When the Union Pacific merged with the Southern Pacific, in the year 1901, I was traveling freight agent of the Southern Pacific Company out of Portland and covered the territory in western Oregon. A year prior to decision of the Supreme Court dissolving the merger of the two lines, I was appointed general freight agent of the Southern Pacific lines in Oregon, the organization of the two systems being changed (2811) whereby a separate set of officers was established for each system. At the time the decision dissolved the two systems, and in the latter part of 1912, I was appointed general freight agent of

the Oregon-Washington Railroad & Navigation Company and have since acted in that capacity. I have been over this central Oregon territory.

The lines of the Oregon-Washington Railroad & Navigation Company are shown on map which has already been produced. During the period of consolidated operation, the line to the north extending from Portland to Grays Harbor and to Tacoma and Seattle was projected and completed, and operation of same com-
1508 menced in 1910; and during this same period of consolidated operation the Oregon Eastern Railway Company was organized in 1905 for the construction of a line across the State of Oregon from Vale to Natron, near Eugene, from where it would connect with the projected line from Eugene to (2812) Marshfield. Construction was commenced on this cross-State line west from Vale and east from Natron, and to connect with this cross-State line construction of a line north from Klamath Falls on the Oregon eastern survey was prosecuted.

In the year 1909 construction by the Des Chutes Railroad Company, a subsidiary corporation, was commenced from a point of connection with the O. R. & N. at Sherman, on the main line, and proceeded south for Bend. This line was completed to Bend, and opened for operation in the year 1911. 95.30 miles of it are owned by the Des Chutes Railroad Company and 53.14 miles of our Des Chutes line are owned by the Oregon Trunk Railway but are under joint operation for a period of 999 years from May 17, 1910, the Oregon-Washington Railroad & Navigation Company operating the entire line from Sherman Junction to Bend. There is a lease from the Des Chutes Railroad and contract with the Oregon Trunk to the O.-W. R. & N.

The line from Malheur Junction, near Ontario, was completed to Vale and opened for operation in the year 1906, and construction from Vale west on the Oregon Eastern survey commenced in August, 1911, and was completed to Riverside, a point 91.2 miles westerly from Malheur Junction, in the year 1913. This line is of high-class construction and entailed (2813) heavy expense, many miles of same being through the Malheur Canyon and many crossings of the Malheur River being involved.

When this cross-State line was conceived, the traffic eastbound and westbound for Portland and the points in western Oregon north of Ashland was routed over the Oregon Railroad & Navigation Company to and through Portland instead of via Roseville
1509 and Ogden. With such operation and routing and with the extension of the line north to Grays Harbor and Seattle, it was appreciated that congestion of the Portland terminals was inevitable, and it was determined that such congestion could be avoided by routing east and westbound traffic originating and destined to points in western Oregon over a line across the center of the State, and it was thought that the line south of Klamath Falls would also

facilitate the movement of the north-and-south business. In the then existing situation, it was determined that this proposed line across the State could be sustained and justified.

In 1910 the Oregon-Washington Railroad & Navigation Company was organized, and into its organization were merged the parent Oregon Railroad and Navigation Company and numerous branch lines constructed under individual charters, and the line north from Portland to Grays Harbor and Puget Sound points, and at about that time there was conveyed to the Oregon-Washington Railroad & Navigation Company all the rights and surveys east of Odell and all of the branch lines except the Des Chutes branch, (2814) which is still owned by the Des Chutes Railroad Company but operated by the Oregon-Washington Railroad & Navigation Company, and at about the same time the line from Natron through Klamath Falls, partly constructed, was conveyed to the Central Pacific Company.

It therefore came about, with the unmerging of the Union Pacific system and the Southern Pacific system, that the cross-State line from Vale west terminated at Odell junction, near the foot of the eastern slope of the Cascade Mountains, without any access to the terminal at Portland or to the very productive and large consuming territory in western Oregon.

In this situation the Oregon-Washington Railroad & Navigation Company completed its line west to Riverside and stopped construction at that point. Later, in the hope that the Harney Valley might become reclaimed and settled and to the end that more traffic
1510 might be obtained for this line from Malheur junction to Riverside, the Oregon-Washington Railroad & Navigation Company extended the line 33.9 miles from Riverside to Crane, and this extension was opened to traffic in 1916.

Subsequently the Oregon-Washington Railroad & Navigation Company took necessary action to empower it to extend its line from Crane to Burns and it obtained authority from the Interstate Commerce Commission for the construction and built the extension 30.2 miles to Burns where by its articles (2815) of incorporation its line from Ontario junction terminates. It also relinquished to Federal Government all Government rights of way west of the Ontario-Burns line.

This extension from Crane to Burns was completed and opened for operation in December, 1924. Its purpose was to serve a large lumber milling operation at Burns but the mill has not been completed and the anticipated lumber traffic has not yet materialized.

Shortly after the time when the Union Pacific and the Southern Pacific were unmerged, the Southern Pacific reformed its traffic whereby to route the east and west transcontinental business originating from and destined to points in western Oregon through Ogden and the Roseville gateway, and this action, of course, removed the possibility of serious congestion at the Portland terminals, and with other considerations suggested rendered it impossible for the

cross-State line to look to western Oregon for traffic to sustain its operating costs, maintenance, and investment. (2816.) As to what the tariffs were before they were reformed, before the Southern Pacific and Union Pacific were merged, speaking with reference to lumber rates were in effect, that is on class and commodities other than lumber, through the Portland gateway and through the Ogden and Roseville gateways. There was, however, no rate on lumber from Southern Pacific-Oregon lines, no through rates, via the
1511 Portland gateway. The rates applied through the Roseville and Ogden gateway. After the merger took place all of the transcontinental rates, applying through the Ogden-Roseville gateway, were canceled from the tariffs and established through the Portland gateway. So that all of the traffic originating and destined to points on the Southern Pacific lines in Oregon moved through the Portland gateway until after the lines were dissolved, that is after they were unmerged.

Comr. McManamy. At that time the Southern Pacific lines in Oregon were operated by the O.-W. R. & N. or the O. R. & N., as it was at that time, were they not?

A. Joint operation; yes. As far south as Ashland. (2817.) It was under the same general officers, with headquarters at Portland. That covered the period about 1901 to 1912. I became general freight agent of the Southern Pacific in September, 1912, and prior to that time there was no separate general freight agent for the Southern Pacific-Oregon lines.

There have been many changes taking place since this cross-State line was conceived. As stated, during the years of the merger, that the merger was in effect, the eastern traffic to and from western Oregon was routed and handled through Portland. Following the separation of the Union Pacific and Southern Pacific transcontinental rates were reestablished (2818) via Roseville and Ogden. The Spokane, Portland & Seattle Railroad, owned jointly by the Northern Pacific and Great Northern, was completed into Portland in 1908, subsequently taking over the electric line into Salem and extending to Eugene in 1911.

There were no through joint rates on lumber to the East from points on Southern Pacific-Oregon lines via Northern Pacific and Union Pacific were merged. But after the separation, Great Northern through Portland during the period that the South-
ern Pacific and Union Pacific were merged. But after the
1512 separation, and following the entrance of the so-called Hill lines into western Oregon, through joint rates on lumber have been established from the Southern Pacific-Oregon lines, Leona and north—Leona is really about the divide between the Willamette and the Umpqua Valley to all eastern destinations. Leona is between Cottage Grove and Roseburg.

Through joint rates have been established from the Southern Pacific-Oregon lines, Leona north to all eastern destinations through Portland and the Spokane, Portland & Seattle Railway and its con-

nections, also through Portland and the Northern Pacific and Great Northern direct, so that the lumber shippers can now route traffic to the east via all lines serving the Portland gateway.

The Panama Canal was opened for operation about 1912, and the development of canal traffic since the war has been (2819) rapid causing a very substantial loss of transcontinental business to the rail lines.

At the time when the construction program outlined under the joint operation was adopted, the heavy tonnage was east and westbound through traffic and very greatly preponderated the north and south business. Now since the canal has taken away so much of this east and west business, large additional investments to handle it can not be justified for the operations during the past few years indicate a very serious decreasing tendency in its volume. The movement to and from coast terminals reached by the O.-W. R. & N., routed through the canal, for the years 1921 to 1927, inclusive, has been approximately as follows:

These figures are taken from the port reports of Portland, Tacoma, and Seattle and do not include Astoria and Longview.

Eastbound, 1921—this is merchandise, not including lumber—174,269 tons; 1922, 299,001 tons; 1923, 454,491 tons; 1924, 314,272 tons; 1925, 344,582 tons; 1926, 370,620 tons; 1927, 378,351 tons.

1513 Westbound, 1921—141,299 tons; 1922, 358,801 tons; 1923, 542,699 tons; 1924, 462,008 tons; 1925, 521,471 tons; 1926, 568,629 tons; 1927, 568,314 tons. (2820.)

I have similar information for the lumber tonnage from Northwest ports for the same period eastbound: 1921, 211,000,000 feet; 1922, 665,844,090 feet; 1923, 925,134,535 feet; 1924, 1,264,854,180 feet; 1925, 1,701,342,798 feet; 1926, 1,988,911,739 feet; 1927, 1,919,668,928 feet.

Eastbound movements mean to the Atlantic coast and the eastbound movement via the canal to the Atlantic coast and the Gulf of Mexico.

Westbound figures are the canal movements from the Atlantic coast and the Gulf of Mexico through the canal to the Portland and Puget Sound ports. Westbound is incoming and eastbound is outgoing at Portland and Puget Sound.

Included in above figures covering eastbound movement via the canal to Atlantic coast from Northwest ports are shipments from British Columbia ports. Eliminating the shipments from British Columbia ports leaves the following movement from the ports in the State of Oregon and Washington: 1921, 205,973,429 feet; 1922, 605,057,011 feet; 1923, 771,852,581 feet; 1924, 1,027,046,030 feet; 1925, 1,375,023,957 feet; 1926, 1,613,138,155 feet; 1927, 1,625,107,499 feet.

The eastbound lumber movement from Oregon and Washington (2821) ports via the canal for the year 1926 reduced to carloads on basis of 25,000 feet to the car would be 64,525 carloads.

Following is a statement of the lumber shipments to California by water from the States of Oregon and Washington for the years 1924, 1925, 1926, 1927.

This is coastwise movement from the Oregon-Washington ports going south.

Year 1924, Oregon 566,835,907 feet, Washington the same
1514 year, 1,054,993,002 feet; total 1,621,828,909 feet; 1925, Oregon, 610,147,835 feet; Washington, 1,063,051,114 feet; total, 1,673,198,949 feet; 1926, Oregon, 578,335,057 feet; Washington 1,084,583,624 feet; total, 1,662,918,681 feet; 1927, Oregon, 559,957,095 feet; Washington, 949,105,095 feet; total, 1,509,062,190 feet.

The coastwise lumber movement from Oregon and Washington ports to California during the year 1926 reduced to cars on basis of twenty-five thousand feet to the car (2822) would be 66,516 cars.

Exam. ROGERS. Have you got the corresponding rail movement east, of those classes, that is eastbound and westbound and to California during the same period.

Mr. SPENCER. I think that all shows in Wiggins' exhibit, doesn't it?

Exam. ROGERS. I don't know.

The WITNESS. Well, from off the Southern Pacific. I have made some analysis, as far as our line and the Southern Pacific is concerned, which will be later in this report.

Exam. ROGERS. That is what you would need, isn't it, to back up against those figures?

A. I undertake later on in this statement here to make some comparisons.

Mr. SPENCER. It shows the purpose. I don't know how persuasive it may be considered.

Exam. ROGERS. The purpose of it is to show the changed condition since this line was projected across the State. If even with this canal movement there is a greater movement by rail than there was then, it does not show that at all?

The WITNESS. I can show you some decreases, Mr. Examiner.

1515 Mr. SPENCER. It shows business that would have been—the cross-State line was located in 1906 and 1907, Mr. Examiner, and the canal opened in 1912, and the business going (2823) by the canal was obviously the business that the cross-State line was to take care of.

Exam. ROGERS. Well, it may be obvious to you, but it is not obvious to me at all. There may be a greater movement now by rail than there was then.

Mr. DEY. That may be, but then the railroad was not justified then for the then business, but it was looking into the future, expecting to handle this increase in lumber business that was to come.

Water shipments from ports in Oregon and Washington exported to foreign countries, also Alaska, the Hawaiian Islands, the Philippine Islands and Panama Canal Zone for the year 1926
1516 amounted to 1,571,264 feet, and in 1927, 1,164,229,171 feet; and the 1926 figure reduced to carloads on the same basis as before would be 62,850 carloads. (2824.)

Summarizing the above figures shows a total movement of lumber by water from Oregon and Washington ports for the year 1926 of 4,847,320,036, that equivalent to 193,891 cars.

I haven't any figures to show to what extent the water movement to California points moved east after it reached those points from Oregon and Washington ports, but from my experience with the situation I would say that none of the Oregon lumber moves east that goes down the coast after it reaches California. There is some movement from California north Pacific coast ports that moves into the California ports and then east, because there are arbitraries applying from those points to San Francisco and Los Angeles in connection with rail rates beyond. But there is none from Oregon or Washington. The total cut of lumber in the States of Oregon and Washington for the year 1926 was approximately twelve billion feet, so that the water-borne movement amounted to forty per cent of the total cut of the two States, and that total cut includes east of the Cascades, also. (2825.)

Mr. SPENCER. Mr. Lounsbury, you were asked the available corresponding figures for the rail movement as compared with this increase with the water movement. Have you that data to call to the attention to the examiner in the exhibit furnished by Mr. Cornwall? Perhaps that might meet the inquiry made. I don't know whether it does or not.

A. I notice by reference to Exhibit 53 that on the first page Mr. Cornwall shows the production by States for the years 1920 to 1926, inclusive.

Comr. MCMANAMY. That only applies to lumber. My inquiry went to all tonnage. That is the way I understand it. If it is in the record, why, we won't need to consider it further.

1517 I would like to call attention to page 2 of the last tabulation of percentages of rail and water shipments from 1920 to 1926, which corresponds with the last figures that I gave. For example, the production, total production, Oregon (2826) and Washington, for 1926, is shown—I gave it as twelve billion feet, and this total corresponds with that. I also stated that the water-borne traffic was 40 per cent of the total, and this corresponds with that, because it shows from Oregon and Washington by rail there is 52 per cent from Washington, 71 per cent from Oregon, which would average 60 per cent.

When the east and westbound business destined to and originating from Portland and points in western Oregon is analyzed it will be found that the Oregon-Washington Railroad & Navigation Company handles several thousand cars less of this business per month now than it enjoyed at the time the lines were unmerged, and the Oregon-Washington Railroad & Navigation Company, as shown by its statement, is actually suffering for the need of this business and has more than ample facilities to take care of it efficiently in very greatly increased value.

During the first eleven and one-half months of Federal control, namely, January 1st, to November 15, 1918, the Southern Pacific Oregon lines delivered to Union Pacific, Portland, destined east to Ontario, Oregon, 8,310 carloads of forest products, as compared with 2,256 carloads during the year 1926. That was in 1918.

West bound from territory east of Ontario, Oregon, destined to points on the Southern Pacific-Oregon lines the Union Pacific, Oregon-Washington Railroad & Navigation Company (2827), delivered to the Southern Pacific at Portland during period January 1st to November 15th, 1918, 1,350 carloads of all commodities, as compared with 935 carloads in 1926.

1518 Existing conditions dictate and demand that this traffic from and to western Oregon be interchanged with the Southern Pacific at Portland, and there is no reason or inducement for interchanging it at Crescent Lake or any other point of connection with the so-called Natron cut-off. The mileage from Eugene to Portland is 123 miles on a water-level grade.

The mileage from Eugene to Crescent Lake is 96 miles, over a mountainous grade.

By far the heaviest traffic originating or that will originate in western Oregon is lumber, and during the year 1922 the lumber traffic originating on Southern Pacific-Oregon lines destined to Utah and points east thereof delivered to the Union Pacific system lines, including the Portland gateway, amounted to 290,577 tons, and was divided at the interchange points, Portland and Ogden gateways, as follows:

At Ogden, 204,044 tons (2828); at Portland, O.-W. R. & N., 86,533 tons.

Of this total movement 175,521, or 60 per cent of the tonnage originated at points Albany, Corvallis, and north thereof, including Yaquina and Mill City branches from which the main line haul to Portland is 80 miles.

Following is a statement of the carloads and tonnage of lumber and forest products originating on Southern Pacific-Oregon lines, except Klamath Falls line, and destined to points to which rates apply via Portland or Ogden gateways:

Year 1922, via Portland, 86,533 tons; via Ogden, 204,044 tons; year, 1923, via Portland, 2,553 cars, containing 80,019 tons; via Ogden, 8,353 cars, containing 267,860 tons; 1924, via Portland, 2,164 cars, containing 61,364 tons; via Ogden, 8,695 cars, containing 262,803 tons; 1926, via Portland, 2,256 cars, containing 84,256 tons; via Ogden, 13,844 cars, containing 449,930 tons. I did not have the 1925 figures. I made this up to 1924 for the other case, and then I show in comparison 1926. (2829.)

1519 You will note that during the years from 1922 to 1926 there has really been a decrease in the movement of lumber and forest products from off the Southern Pacific-Oregon lines destined east via the Portland gateway, while there has been an increase during that period through the Ogden gateway.

The Southern Pacific will receive freight at Portland from the Oregon-Washington Railroad & Navigation Company consigned to points south of Leona. They don't insist on having it interchanged at Portland. Our transcontinental rates are in effect through the Portland and Ogden gateways to all points on the Southern Pacific-Oregon lines, Ashland and north, on the same basis, both east and west.

All other carload commodities, except lumber, originating on Southern Pacific-Oregon lines, except Klamath Falls line, and destined to points to which rates apply via Portland or Ogden gateways were as follows (2830):

In 1922, via Portland, 4,331 tons; via Ogden, 34,259 tons; 1923, via Portland, 319 cars, containing 5,772 tons; via Ogden, 3,792 cars, containing 67,875 tons; 1924, via Portland, 700 cars, containing 12,148 tons; via Ogden, 2,964 cars, containing 51,275 tons; 1926, via Portland, 1,208 cars, containing 17,211 tons; via Ogden, 3,226 cars, containing 53,196 tons. The destination of those last cars is east of Ogden, which could be routed either through the Ogden or Portland gateways and were destined east. I do not know who routed them. it may be routed by the shipper, the consignee, the broker, or whoever handles the business.

The increase in movement via Portland is occasioned by the routing of broccoli from Douglas County and celery from Marion County to eastern markets. The increase in 1924 and 1926 is due to the movement of broccoli and celery. (2831.)

1520 The westbound carload tonnage, including freight of all kinds, except lumber, from eastern territory destined to points on the Southern Pacific-Oregon lines, except Klamath Falls line, to which rates apply via Portland or Ogden gateways delivered to the Southern Pacific at Portland for the years 1922 and 1926, was as follows: 1922, via Portland, 22,144 tons; via Ogden, 5,312 tons; 1926, via Portland, 935 cars, 22,806 tons; via Ogden, 966 cars, 17,694 tons.

The bulk of the tonnage moving westbound via Portland consists of coal from Utah and Wyoming, and corn from Nebraska and other eastern States.

In the year 1922 the tonnage of corn was 6,302 tons, and coal 15,634 tons.

In the year 1926, the coal from Utah and Wyoming amounted to 248 cars, the corn from Nebraska, and so forth, 235 cars, or a total of 483 cars.

The western movement of corn delivered to the Southern Pacific at Portland in 1927 for all of western Oregon was 246 cars.

I desire to emphasize that the lumber movement from Oregon and Washington ports during (2832) the year 1926 approximated 193,891 carloads.

Exam. ROGERS. Can you tell us why the Union Pacific did not bring that traffic around through Portland that they did deliver to the Southern Pacific at Ogden?

A. It was routed that way.

Exam. ROGERS. By whom?

A. By the shipper or the consignee.

Exam. ROGERS. Well, do they bring freight around through Portland that is unrouted?

A. Well, the unrouted business, if it is routed Union Pacific system, routes through Portland, but if it is routed Union
1521 Pacific-Southern Pacific without designating the gateway I believe that would go to the Southern Pacific at Ogden, because it doesn't specify Union Pacific system lines.

Exam. ROGERS. Well, Union Pacific Railroad-Southern Pacific Railroad.

A. I want to say that there is very little of that unrouted business. The shipper or consignee routes his traffic. I don't think you would find a half dozen cars a year unrouted. (2833.) I believe that eastbound as well as westbound the billing will show the through routing.

Exam. ROGERS. The shipper routes both ways?

A. Yes, sir; I might state, just along that line, that a great deal of the westbound tonnage, particularly merchandise tonnage that moves into this western territory, particularly this northwestern territory, is eastern controlled, that is, it is controlled by the traffic manager of the manufacturing house, like United States Steel, and the American Steel and Wire, and the implement houses and factories that employ traffic managers. They divide up the percentages of westbound traffic via the westbound lines, the trunk lines, to carry over the year. Many of them are governed in their division of traffic by purchases from those lines. The Union Pacific and Oregon-Washington Railroad & Navigation Company suffer in this territory by reason of the fact that our percentage of that business (Union Pacific system) the heavy percentage of that division of tonnage westbound, goes to California.

Comr. MCMANAMY. Well, I was just wondering why a car of merchandise consigned to Roseburg Union Pacific-Southern Pacific can be interchanged at Ogden.

Exam. ROGERS. You mean when it is unrouted?

Comr. MCMANAMY. Yes; now, there are evidently many of (2834) such shipments, according to your figures.

1522 Q. There isn't any other junction, is there?

A. There is either the Ogden gateway or the Portland gateway.

When the shipments are routed by the system lines—that is, if it would be Union Pacific system-Southern Pacific it would be turned over to the Southern Pacific at Portland, but the shipper usually specifies the gateway. The billing usually shows where the shipment should be made.

Exam. ROGERS. Well, if the billing shows Union Pacific-Southern Pacific, as I get your explanation, you construe "Union Pacific" as Union Pacific Railroad, not the Union Pacific system?

A. Yes, sir; well, I think that the Southern Pacific would construe it that way, too. That is, there is no more reason why they should

come around through the Portland gateway as against the Ogden gateway. That would be a guess on my part.

Comr. McMANAMY. Well, for the purpose of illustration—suppose we have a car of merchandise consigned to Santa Barbara, Union Pacific (2835) Southern Pacific, would that also be turned over to the Southern Pacific at Ogden?

A. Yes, sir.

Comr. McMANAMY. In spite of the fact that the Union Pacific has a line to Los Angeles within 160 miles of Santa Barbara?

A. I don't understand that rates applied through the Los Angeles gateway to Santa Barbara.

Comr. McMANAMY. Well, there isn't, you say?

A. Yes.

Mr. McCULLOCH. Mr. Commissioner, may I ask if Mr. Lounsbury could answer the question if it applied to a point on the Southern Pacific just south of Los Angeles to which probably there would be rates via that route?

A. The same answer applies; it would.

1523 The number of carloads of lumber and forest products originating on Southern Pacific-Oregon lines, except Klamath Falls line, and destined to points Ogden and east for the year 1926, was 16,100 cars, of which 2,256 cars moved via the Portland gateway.

The total number of carloads of lumber and forest products moving east via long haul through Huntington and Union Pacific system lines from mills on the Oregon-Washington Railroad (2836) and Navigation Company and connecting lines for the year 1926 amounted to 38,798 cars, so that this information would indicate that the movement handled east originating on the Oregon-Washington Railroad & Navigation Company and its connections was considerably smaller than that handled by water from Oregon and Washington ports, either via the Canal or California, or to foreign ports, as shown by these figures that I gave.

From this it will be seen that the all-rail movement via Union Pacific system lines through Huntington and from Southern Pacific-Oregon lines points, except Klamath Falls branch via Ogden and Portland approximated 11½ per cent of the total cut of the Oregon and Washington product for the year 1926, and only 28 per cent of the total movement by water from Oregon and Washington ports for the year 1926.

To get that 11½ per cent, it is necessary to add to the number of cars originating on the Oregon-Washington Railroad and Navigation Company and its connections the total number of cars originating on the Southern Pacific-Oregon lines, except the Klamath Falls branch, which made a total of 54,994 cars.

Now, I may add there that this 54,994 cars for 1926, which includes the total number of cars of forest products originating on the Southern Pacific-Oregon lines which went east of Ogden either via the

Portland or Ogden gateway, and all of the cars originating on the Oregon-Washington Railroad & Navigation (2837)
1524 Company and connections which went through the Huntington gateway, doesn't amount to the number of carloads that move north through the canal to the Gulf and Atlantic ports, and it doesn't amount to the number of carloads that move from Oregon and Washington ports to California coastwise.

The canal was opened in 1912.

Exam. ROGERS. Well, I was just wondering, if, as I understand the point of the canal testimony is, and your testimony about the canal, that that is a condition which arose—

A. Subsequently.

Exam. ROGERS. Subsequent to the thought of the Union Pacific about this line.

A. Yes.

Exam. ROGERS. But I was wondering if the Union Pacific (2838) in putting a line across the State in—What? 1912?

A. No, sir.

Exam. ROGERS. What?

A. That was started around 1906.

Exam. ROGERS. That was about the time the canal started? It was testified that it was started in 1907.

A. Nobody could conceive that the canal was going to take the Pacific coast and Atlantic coast business practically all away from the railroads, which it is doing. Right along that line I would like to tell you that the railroads are not transporting any rough lumber to-day from the Pacific coast to the Atlantic coast. What we are handling now is the finished lumber, and even finished lumber and doors can be handled by water.

Exam. ROGERS. Well, didn't you transport the rough lumber before the canal was built?

A. Yes, sir; there was no movement via ater to the Atlantic coast before the canal was finished. Even merchandise moved around through Tehuantepec.

1525 Exam. ROGERS. Was there a movement of rough lumber by rail?

A. Yes, sir; timbers and green lumber and rough lumber.

Exam. ROGERS. I was really laboring under a misapprehension. I had in mind that this line was (2839) projected in 1912 or '13.

A. That was the time of the dissolution. The Oregon-Eastern was organized in 1905.

Exam. ROGERS. That was really before the canal was begun to be constructed. That was in 1907.

A. Yes, sir; and at that time all of the lumber originating in western Oregon on the Southern Pacific-Oregon lines was moving through the Portland gateway, under the merger, and, as there was no canal movement, as our line was completed to Puget Sound and Grays Harbor in 1910 we figured on handling a tremendous tonnage

originating north of Portland in the Puget Sound territory and this western Oregon tonnage, as well as all the Portland tonnage, through the Portland gateway.

Mr. SPENCER. Is that Grays Harbor, too?

A. Yes, sir; Well, now we can take all the traffic that originates in western Oregon through the Portland gateway and then not be congested, and all the rest of the traffic that originates north of Portland that we can get, to the East.

Exam. ROGERS. You mean you can handle, in addition to what you are handling all that originated by the Southern Pacific through the Portland gateway?

A. Yes, sir (2840); very nicely.

Exam. ROGERS. Well, if that can be arranged it will be all right, will it?

A. Quite satisfactory. I have a compilation here which I took from Abbey's Register, showing the number of mills and production of lumber in Oregon and Washington, which I think I will leave out, as that will be a duplication of the figures submitted in Exhibit 53.

1526 Exam. ROGERS. Go ahead and put them in. Let's see what they show.

A. Oregon and Washington, the year 1922: Oregon, number of mills 436, production 3,023,768,000 feet; Washington, number of mills 538, production 5,836,277,000 feet.

1923: Oregon, number of mills 527, production 3,966,083,000; Washington, number of mills 597, production 6,677,656,000 feet.

1924: Oregon, 660 mills, production 3,665,547,000; Washington, 648 mills, production 6,267,343,000. (2841.)

1925: 651 mills, that is Oregon, production 4,216,383,000; Washington, number of mills 623, production 7,027,325,000.

1926: Oregon, mills 653, production 4,454,735,000; Washington, mills 632, production 7,546,239,000.

Exam. ROGERS. That is quite a discrepancy between your mills and that on Exhibit 53, although the production is about the same.

A. I imagine that it is a very difficult matter to keep track of the mills, inasmuch as there are increases, and there are some mills that have been abandoned.

Exam. ROGERS. You have got over 600 in Oregon in 1926, and Mr. Cornwall has 460. (2842.)

A. Well, I don't know how they get the figures. I asked the Abbey's Register to prepare that for me. They have a regular lumber publication which shows the list of mills. I can take that register and figure out more mills from that than I have shown here. They give a list of all the mills and where they are located, and some of them are no doubt obsolete and have been for some time, and I imagine that some of the mills that are listed on their pages have probably been burned and some of them have cut out the timber and moved away, and they show small mills as well as large mills,

and there are a number of small mills, portable mills, that move around.

Production of lumber output in the States of Oregon and Washington has been very substantially increased during the past
1527 few years by the construction and operation of large mills at Vernonia, Oregon, and Longview, Washington.

The Oregon-American Lumber Company's mill at Vernonia was completed and began operation in July, 1924. It has a capacity of 350,000 feet in one shift of eight hours, and by working two shifts would produce 700,000 feet per day. We understand they are now operating two shifts.

The Long-Bell mill at Longview has a capacity of 1,220,000 feet per eight-hour shift, divided as follows: 600,000 feet, rough lumber; 400,000 feet, dressed lumber; 110,000 feet, lath (2843); 100,000 feet, shingles; 10,000 feet, mouldings. The Long Bell has two mills; they have double operation.

Exam ROGERS. What was your daily capacity?

A. 1,220,000 feet. Eight-hour shift.

Exam. ROGERS. Mr. Cornwall gives 850,000.

A. I think he gave that just for the mill alone.

Exam. ROGERS. No; he has given two mills.

A. No; I mean for the cut, lumber cut. These figures that I obtained through our representative, who makes that territory all the time. I asked him to give me the cut of the mills.

Exam. ROGERS. What I was concerned about, where there is such a wide discrepancy in data purporting to show the same thing, which are we going to rely on?

A. Well, that is the largest operation I know of in this territory. I will submit the exact figures, Mr. Examiner. (2844.)

This mill was completed and began operations July 31, 1924. In addition thereto the Weyerhaeuser Company have announced construction of a mill operation at Longview with capacity
1528 to manufacture 800,000 feet in one eight-hour shift.

There has been a very marked increase in the past few years in the growth of substitute building materials displacing lumber in the markets to a great extent.

In a pamphlet entitled "Memorial to the Railroads of the United States by the Lumber Industry," printed and distributed by National Lumber Manufacturers' Association pursuant to an understanding reached at meeting in Chicago, Illinois, on July 23, 1926, the following data under heading "Growth of Substitutes" is submitted:

"The great growth in substitute building materials from 1919 to 1925 is shown in Exhibit 1" of the pamphlet—largely prepared from reports by the U. S. Census Bureau. It will be noted that while softwood lumber production increased only 15.7 per cent and hardwood production decreased 7.2 per cent the growth in substitute materials ranged from 131.4 per cent to 1,125 per cent. The output of hardwood lumber, wooden shingles, maple flooring, and the amount of lumber consumed in box manufacture are the only items of the 30

listed which showed a decrease from 1919. The great increases were shown by fibre board, 1,125 per cent, which displaces large quantities of lumber; prepared roofing 131.4 (2845) per cent; wall board, 581 per cent; box board, 154.6 per cent; and paper shipping boxes, 109.9 per cent.

"As illustrative of the loss in lumber tonnage to the carriers resulting from the displacement of lumber by fibre boards, the following table shows the increased production of one of the fibre boards, Celotex, during the past five years from 12,000,000 square feet in the year 1922, to a production of 220,000,000 feet in 1926, or an increase of 1,733.3 per cent. This material loading in standard cars only about 34,560 pounds or 57,600 square feet, gave the carriers in 1922, approximately 208 cars of revenue traffic and in 1926, approxi-
1529 mately 3,819 cars. This fibre board to a large extent takes the place of lumber. About 850 square feet, its vendors allege, will displace 1,200 board feet of lumber, or a ratio of about 1 to 1.4. With lumber loading 20,000 board feet to the car, it will be noted that the 3,819 cars of this fibre board alone cost the carriers 15,400 cars of lumber traffic in 1926, and 32,778 cars over the period 1922–1926." (2846.)

The exhibit shows the production of Celotex for 1922, 12,000,000 square feet. 1926, 220,000,000, which is 1,833.3 per cent. Number of cars replaced, 3,819. 1927 is estimated here at 360,000,000 for 6,076 cars.

The fibre board known as Celotex manufactured in the south made from sugar and cane fibre, and is converted into a pulp and finished as a fibre board.

We are informed that there is ample supply of raw material and that the increase in the manufacture of this product is sufficient to take care of any increased demand therefor.

In considering this cross-State line of the O.-W. R. & N. terminating at Crescent Lake, we are compelled to take note of the Southern Pacific's relation to this western Oregon country. Its main lines and branches reach the districts and the points where (2847) the traffic originates and where it is delivered. It has expended over $15,000,000 in completing the so-called Natron cut-off from Eugene through Klamath Falls to Weed.

It is not conceivable that that company will voluntarily short-haul itself and deliver at Crescent Lake traffic that it can haul and deliver to the Union Pacific at Ogden or vice versa.

It may be said that with the great increase of business north and southbound serious congestion might take place through the Roseville gateway, necessitating diversion at Crescent Lake, but before making any such sacrifice, if such congestion should actually
1530 occur, the Southern Pacific would naturally extend its line through Alturas to a connection with its so-called Natron line at Klamath Falls, and thereby relieve the congestion, or turn over the business to the O.-W. R. & N. at Portland. They have announced

that they intend to do that. They would naturally favor their long haul, and it is inconceivable that under existing conditions the line from Crescent Lake across the State would receive any more traffic from western Oregon originating on the Southern Pacific and going east than it is now receiving through the Portland gateway.

Turning to the central Oregon situation with a view of locating transportation lines to serve that country, we find (2848) that the resources available to substantially contribute to the support of the railroads in that country are located on the east side of the State and consist of timber to the north of Burns and the Harney Valley to the south of it, and by Harney Valley we would include the Blitzen Valley south of Malheur Lake, and the other resources are in the timber and valleys lying west of line if drawn from Bend to Lakeview.

The situation is graphically reflected upon the key map marked Exhibit 3, upon which north and south lines have been drawn to indicate the west line of the resources in the western part of central Oregon.

Between these two lines is an unproductive country. The projected line from Crane west to Crescent Lake, while traversing some country of possible reclamation and development along the north shore of Harney Lake, enters the area of resources in the western part of central Oregon at its narrowest point and can not possibly serve it with any degree of satisfaction or efficiency. Indeed, the few miles traversed by it in the timbered area is to some extent accessible to the so-called Natron cut-off now under construction.

1531 As to when this statement was prepared by me, I have written and corrected it a number of times. (2849.) Part of it is taken from my statement in the former hearing.

Mr. SPENCER. What about the Great Northern line in that connection, there?

A. The Great Northern line has been constructed now from Bend to Klamath Falls.

Q. Where you go into this timbered area from the east which railroad do you encounter first?

A. You encounter the Great Northern first.

Q. Then the Cascade line of the Southern Pacific?

A. Yes; which is on the west about twenty-one miles.

A line constructed in central Oregon must depend upon the pine timber as its principal resource.

The line constructed from Crane to Burns will serve the timber to the north and it can not be looked to as a resource for the cross-State line because it must move to the east and to the southeast. (2850.)

We are satisfied from our study of the situation that under existing conditions cross-State line as located from Crane to Crescent Lake should not be considered and that its construction would entail a great waste of capital, and that it can not pay its operating expenses and maintenance charges, to say nothing of the taxes and interest on the investment.

The only way whereby the proposed cross-State line could possibly be supported would be to restore its relation to the railroads, their cities, including Portland, towns and their industries in western Oregon, as same obtained when the cross-State line was located and its construction undertaken, which is impossible under existing conditions.

I have personally traversed the central Oregon country in attempting to make a survey and estimate of its traffic possibilities, and have also had a traffic representative travel through
1532 the country, and from the inquiries that I have personally made and that I have had made under my direction think I have a fairly good conception of its traffic possibilities.

From the information I have assembled I have prepared in exhibit form statement of the tonnage and revenue which I consider might be developed with this line contemplated by the Oregon eastern survey if constructed east of Crescent Lake.

In making these estimates I have theoretically constructed (2851) a sawmill at or near mile post 280 on the surveyed line on the Crane-Crescent Lake line with a capacity of 100,000 feet daily. I now present these exhibits for identification. The first exhibit is my estimate of the tonnage and revenue.

(Said statement was thereupon received in evidence, marked "Defendants' Exhibit No. 54, Witness Lounsbury.")

The first sheet is intended to show the estimate of outbound traffic for the first year and the revenue to the Crane-Crescent Lake line from this traffic.

The second sheet contains the estimate of tonnage and revenue for the second, third, fourth, and fifth years.

The third sheet is intended to show the inbound movement.

There are two sheets in this compilation covering the first year, and the fifth and sixth pages are inbound estimate of tonnage and revenue for the second, third, fourth, and fifth (2852) years.

It will be noted that in connection with the outbound estimate I did not show any lumber for the first year, because I did not consider that mill would be completed and in operation the first year, and did not show any revenue for the second year, but began with the third, fourth and fifth years. (2853.)

I do not show any business as received on that cross-State line from the Great Northern Railroad; nor from Bend, Lakeview, or Klamath Falls.

1533 I do show some business from the Southern Pacific inbound. I show some traffic that will move off of that line to San Francisco and Portland and in the opposite direction, some business to and from the valley, but I do not show any through business by that line. This estimate is prepared with the idea of showing the revenue that would accrue to the line from business originating along the line and going off of it and traffic destined to points on the line. I do not include anything for prospective westbound traffic from Idaho.

Exam. ROGERS. Do you conclude from what you heard here there would not be any of that?

A. The business that is originating now and destined to points on the lines in eastern Oregon which we now operate, can continue to move (2855) via the routes now established and in effect. If you take away any of that traffic from southern Idaho and route it across the cross-State line you would take away from the existing lines as much or more revenue than now would be earned by our existing lines from that traffic.

I wish to make a statement with respect to the product of Alkali Lake. In my estimate I have shown no tonnage or revenue from Alkali Lake, but I have figured up, as a result of Mr. Emerson's testimony, what we might expect if there was an operation there at Alkali Lake, and I will submit the following:

Report on "Potash in 1917," by Hoyt S. Gale and W. B. Hicks, taken from Mineral Resources of the United States, 1917, Part II, page 426, published in 1919, and obtained from the Government Printing Office, Washington, D. C., says:

"Preparations were made to carry out a process for separating potash (2855) from the brines in the pool known as Little Alkali Valley, Lake County, Oregon. A sample from this pond
1534 taken in August, 1915, contained 10.63 per cent of dissolved matter, in which potash ran 3.25 per cent as potassium, or 6.19 per cent if calculated as potassium chloride. This is somewhat richer than many of the other natural brines found in the West. The deposit is small, but as the project was carefully planned it has evidently been estimated that a sufficient amount of potash might be recovered to make a profit from the enterprise by using an inexpensive method of recovering the salts. It is stated that some disagreement concerning the method of handling the matter led to the abandonment of the work after it was well under way."

The report on "Salt Resources of the United States," by W. C. Phalen, Geological Survey Bulletin No. 669, page 130, covering Alkali Lake, published in 1919, and obtained from the Government Printing Office at Washington, D. C., contains the following quotation:

"There is a shallow and variable lake of strong brine in Alkali Valley, southern Oregon, which occupies the bottom of one of the typical desert basins of this part of the Great Basin. A notable deposit of soda is found in and around the lake. The alkali occurs as a crust on the surface of mud in and around shallow saline ponds, and there are 'pot holes' (2856) near the margin of the deposit in which almost pure soda crystalizes. These 'pot holes' have been worked for soda in a small way, and the deposit as a whole has been taken up by a company which plans to work it for soda and perhaps for other products. Attention has been directed to this deposit as a possible source of potash.

"Hoyt S. Gale, of the United States Geological Survey, examined this deposit in August, 1915, and took samples of the brine and salts

The results do not seem to indicate that the materials are of
1535 promise as a source of potash salts, though these may be recovered in conjunction with other salines. For example, the brine from a pool known as Little Alkali, which is probably the largest body of open water, carriers 10.63 per cent dissolved matter, in which potash ran 3.25 per cent as potassium, or 6.19 per cent calculated as potassium chloride." It follows the same quotation as was made from the other.

From a statement on "Production of Natural Sodium Compounds and Borates in 1926," published by the Bureau of Mines and issued by the Department of Commerce, Washington, D. C., April 19, 1927:

Mention is made therein of the production of sodium carbonate, soda ash, and sodium bicarbonate, from Owens Lake by the Inyo Chemical Company, of Cartago, California, and the Natural Soda Products Company at Keeler, Calif., as (2857) well as other soda products being produced by the Wyoming Soda Products Company at Green River, Wyo., and by the American Potash and Chemical Company, successor to the American Trona Corporation, at Trona, Calif.

In the report made by Mr. W. C. Phalen, of Mineral Resources of the United States, published in 1917, from which an extract is shown above, statement is made that the content of potash in the Alkali Lake deposit is somewhat higher than that commonly obtained in such brines, but is not comparable, for example, with the brine from Searles Lake in Southern California.

I have, therefore, made a study of the rates applicable on these soda products from Searles Lake, from Keeler, Calif., from Cartago, Calif., and from Trona, Calif., to Los Angeles, Calif., Wilmington, and San Francisco, and observed that the rates on this product are very low. From Keeler, California, to Los Angeles, on soda ash, the rate is 21½ cents, minimum 60,000 pounds.

Mr. McCULLOCH. Have you got those distances that you could give, Mr. Lounsbury, when you give the rates?

1536 A. Yes.

Mr. McCULLOCH. For the first one, that 21-cent rate, what was the distance?

A. The distance from Keeler to Los Angeles is 260 miles (2858), and the rate is 21½ cents, 60,000 pounds.

From Keeler to San Francisco the distance is 577 miles; the rate is 25 cents per 100 pounds, minimum 80,000 pounds.

From Cartago to Los Angeles, a distance of 218 miles, the rate on soda ash is 21½ cents, and to San Francisco, 486 miles, 25 cents.

From Searles, to Los Angeles, a distance of 149 miles, the rate is 21½ cents, and to San Francisco, 417 miles, 25 cents.

I might state that I notice this 25-cent rate in each case to San Francisco applies on intrastate traffic only. They have an interstate rate of 28½ cents.

Now on carbonated soda the rates are identically the same. There is a rate from Keeler, from Cartago and from Searles to Los Angeles—to Wilmington, California, of 17½ cents, minimum 80,000 pounds, on traffic moving beyond Wilmington by water destined to points outside of the United States of America. Rates will also apply on traffic destined to Alaska, the Hawaiian Islands, Panama Canal, Philippine Islands, Porto Rico and Virgin Islands. It will be seen at a glance that these are all low rated commodities, and that for movement from California producing points, such as Keeler, Cartago, and Searles, the rates to Los Angeles, Wilmington, and San Francisco have been equalized, notwithstanding the difference in distance. (2859.)

The distance from milepost 190, the nearest point on the proposed line to Alkali Lake, to Portland is 330 miles, and it is fair to assume that were similar commodities produced at Alkali Lake the
1537 rate to Portland could not exceed the rates from California producing plants to California markets on similar commodities.

Having in mind that Alkali Lake is 18 to 20 miles distant from the proposed line, in consequence of which it will be necessary for the shipper to either haul their product that distance or construct a branch line, the railroad could not expect to secure a freight rate in excess of 25 cents per hundred pounds, or $5.00 per ton, and this rate would have to be divided with the Southern Pacific, probably on a mileage pro rata basis.

As stated, the through distance is 330 miles, divided as follows: Milepost 190 to Crescent Lake, 111 miles; Crescent Lake to Portland, Southern Pacific, 219 miles.

The revenue to the proposed line east of Crescent Lake would be 33.6 per cent.

If such a plant as outlined were to be constructed and ship to Portland two cars per day of 100 tons for 300 days per annum at rate of $5.00 per ton, the gross revenue would be $150,000, of which the new line proportion would be $50,400. Should it produce but 50 tons per day and movement (2860) take place to Portland, the revenue to the new line would be $25,200 per year.

It should be borne in mind that a manufacturing plant very seldom makes shipments to the extent of its capacity until a year or more after it has been established, and the completion of a manufacturing plant to the producing stage requires many months from the time it is conceived and construction started.

1538 PORTLAND, OREGON, *August 18, 1928.*

H. E. LOUNSBURY thereupon resumed the witness stand, and testified further as follows:

Direct examination—Contd.

Q. (By Mr. SPENCER.) Mr. Lounsbury, proceed with the discussion you have and analysis of Teutsch's Exhibit No. 1. Or what is your order?

A. That is the next order I have here.

Under heading "Malheur County," page 1, Mr. Teutsch shows estimate of agricultural tonnage available for movement over proposed cross-State railroad, first item being sheep 184 cars, totaling 1,843 tons. During the year 1926 the total movement of sheep from all points on the Oregon Short Line west of Mountain Home to all western markets amounted to 4,192 tons, of which there was no movement to northern California north of Santa Barbara and Mojave, and less than 1 per cent, or 35 tons, to destinations south of Santa Barbara and Mojave, the balance or practically the entire movement being to Oregon and Washington markets. A separate statement of the movement of sheep originating on the Brogan and Oregon eastern branches for the year 1926 shows no movement to northern California, and 23 tons, or 2 cars, (2862) to southern California south of Santa Barbara and Mojave and 1,973 tons, or approximately 179 cars, to Oregon and Washington markets.

Cattle: Mr. Teutsch estimates 378 cars, or 4,723 tons.

In 1926 the entire movement from Oregon Short Line points west of Mountain Home to Pacific coast markets was 19,986 tons, of which 296 tons, approximating 23 cars or 1½ per cent moved to northern California markets north of Santa Barbara and Mojave and 1,313 tons, approximating 101 cars or 6½ per cent moved to southern California markets south of Santa Barbara and
1539 Mojave, the balance, approximating 1,413 cars, or 92 per cent, moved to Oregon and Washington markets.

Q. (By Mr. SPENCER.) Is the distance from those shipping points to those southern California points substantially in excess of the distance via existing routes to the bay cities, irrespective of whether the Wells line or the Ogden route is used?

A. Well, the distance to the southern California market is shorter via the Salt Lake route.

Q. Well, I know, it moves via the Salt Lake route down to Los Angeles?

A. Yes, sir.

Q. Is it further to Los Angeles?

A. No, sir; it is shorter to Los Angeles via the Salt Lake (2863) route than it would be via the proposed cross-State line.

Q. Well, I wasn't asking you that. Of course it is shorter to Los Angeles via the Salt Lake route than it is via the proposed cross-State line, or via any route through California?

A. Yes, sir.

Q. But I am asking you whether it is a longer haul from the originating point that you have just mentioned in southern Idaho to southern California markets than it is via either Ogden or Wells to San Francisco?

A. Yes, sir.

Narrowing the movement down to the shipments from off the Brogan and Oregon eastern branches for the year 1926, there was

no movement of cattle to northern California north to Santa
1540 Barbara and Mojave, and but 78 tons, or 6 cars, to southern California points south of Santa Barbara and Mojave; the balance 5,501 tons, approximating 423 cars, moved to Oregon and Washington markets.

Hogs: Mr. Teutsch estimates 79 cars, or 786 tons.

In 1926 there was but one car of hogs moved from the entire territory on the Oregon Short Line west of Mountain Home to California destinations south of Santa Barbara and Mojave. There were no hogs shipped to California from off the Brogan and Oregon eastern branches. The balance of 595 cars, approximating 5,061 tons moved to Oregon and Washington markets. (2864.)

Horses: Mr. Teutsch estimates 28 cars, or 308 tons.

The movement from west of Mountain Home on the Oregon Short Line in 1926 was 1,989 tons, of which 14 tons, or one car, moved to northern California north of Santa Barbara and Mojave; 195 tons, or approximately 14 cars, moved to southern California south of Santa Barbara and Mojave; the balance 1,450 tons, or approximately 104 cars, moved to Oregon and Washington markets. The big movement of horses is to Portland to the packing plant located at Kenton. This plant has been operating probably two years. As to whether there are any other plants of that kind on the coast, there is a small plant of that kind now at Klamath Falls, one at Butte, Montana, the one at Butte being comparable with the plant at Portland. There is also at this time a representative of the Russian Government in this territory buying horses for shipment to Russia, and a contract has recently been made for 1,750 head, and those horses will be gathered up to a considerable extent in the eastern Oregon and southern Idaho territory. To my knowledge, there are no horse packing plants down in California. (2865.)

I have prepared a statement showing the present rates on live-
stock from Ontario, Vale, Harper, Crane, and Burns to
1541 Portland via Huntington and to San Francisco via Portland and via Wells, also what the rates would be to San Francisco via Crescent Lake using combination of locals on Crescent Lake.

I might say, in connection with the set of exhibits, that to save time I have separated them all, so that they might be distributed at one time, but I will introduce them as I go along as separate exhibits. Livestock is the first one.

From this statement it will be noted that rates on livestock from Malheur County to San Francisco will be no lower via the cross-State line than via existing routes, and with respect to movement of livestock from Malheur County to Portland and Puget Sound markets the distance from Ontario to Portland is 103 miles shorter than the distance via the proposed cross-State line, in consequence of which rates and distance both favor the direct route through Huntington, so that none of the (2866) traffic for the Portland and

Puget Sound markets will move over the proposed cross-State line. line.

Exam. ROGERS. You say "Via Crescent Lake." That is a combination of locals on Crescent Lake?

A. Yes, sir.

Exam. ROGERS. What do you suppose the through rate will be, the joint rate?

A. The through rate, if established, from Ontario to San Francisco by the cross-State line would be no lower than the Ontario-San Francisco rate by the Wells line, and it might be that the rates via the Oregon eastern branch would be the Ontario-San Francisco rate via Wells held as maximum to intermediate points, if through rates, through joint rates, were established.

1542 Exam. ROGERS. These rates via Wells and the other gateways other than Crescent Lake—are they combination of locals?

A. They are through joint rates.

Exam. ROGERS. That would make quite a difference in the comparison, wouldn't it, as to whether they are combination of (2867) locals or through rates?

A. I have no basis on which to figure a through joint rate via the cross-State line. The statement shows for itself.

Exam. ROGERS. Yes; but the combinations of locals are usually higher than through rates, aren't they?

A. Yes; but the establishment of through rates depends upon a good many conditions.

Comr. MCMANAMY. In the event a cross-State line was built, do you know any reason why there shouldn't be joint through rates established?

A. Except that it would short-haul the present routes, and the division of the through joint rates with the Southern Pacific would give the cross-State line a less revenue than they now receive by the established route.

It would short-haul the Portland gateway, and it would short-haul the Wells-Rogerson gateway.

Comr. MCMANAMY. Which line? For instance, take from Mountain Home, which is your dividing point, assume that it would short-haul the Oregon Short Line, would it not be your understanding, by the Rogerson-Wells cut-off? Assuming the Oregon Short Line would operate the cross-State line, as it now does the Burns branch, would the Oregon Short Line short-haul (2868) itself by delivering to the Southern Pacific at Crescent as compared with the Rogerson-Wells cut-off?

A. From Ontario?

Comr. MCMANAMY. No; from Mountain Home? That was 1543 the point you were using. That is why I used it.

A. Yes.

Comr. MCMANAMY. If you haven't got it there——

A. I haven't got the mileage from Mountain Home to Wells, or Ontario to Wells, fixed in my mind, but my notion is that it would short-haul the Oregon Short Line, but I can determine that point in just a minute.

Mr. SPENCER. Well, I think there is no question but what Mountain Home is practically the equidistant point between San Francisco via the Wells line and San Francisco via Crescent Lake.

Comr. MCMANAMY. I was assuming that that would be the point you would use.

Mr. SPENCER. Yes; it may be a few miles east, at a point—Clift, I think it is——

Mr. GOODWIN. West of Mountain Home a few miles.

Mr. SPENCER. West of Mountain Home—but Mountain Home is the shipping point. I will introduce a table showing (2869) Mountain Home and the distance from all these stations, but I wasn't prepared to do that by this witness.

With respect to the California market I have obtained from the Portland "Morning Oregonian" a comparison of price quotations showing the market prices at Portland and at San Francisco, that is to say, the top price shown on same day of each month of 1927 and the first six months of 1928, which is shown in memorandum submitted as the next exhibit. It is on cattle, sheep, and hogs.

(Said statement was thereupon received in evidence, marked "Defendants' Exhibit No. 56, Witness Lounsbury.")

At certain seasons of the year there is a substantial movement of cattle from western Oregon and northern California to the Portland market and a southbound movement from Portland to the California market. (2871.)

1544 Mr. SPENCER. Wait a minute. I wonder if No. 55 was formally introduced. I desire to have it introduced.

(Said statement was thereupon received in evidence marked "Defendant's Exhibit No. 55, Witness Lounsbury.")

1545 The WITNESS. With respect to that I would like to state at this point that I have a record of the receipts of livestock at the north Portland market for the years 1927 and 1926, showing the receipts from off the railroads of this territory serving the north Portland stockyards.

Union Pacific, 1927, 4,446; 1926, 4,961. That is carloads. Decrease 515 cars. Southern Pacific, 1927, 794 cars; 1926, 573 cars; increase 221 cars.

Portland, Spokane & Seattle, 975 cars in 1927; in 1926, 1404; decrease 429 cars.

Other lines, 1927, 190 cars; 1926, 194 cars; decrease 4 cars.

Toal, 1927, 6,405 cars; 1926, 7,132 cars; total decrease 729 cars.

From this it will be seen that the movement off of Southern Pacific lines in Portland, in 1927 of livestock, shows an increase, over 1926, while the other lines show a decrease.

In connection with this table, Exhibit 56, (2872) there is a difference in the rate from the originating territory to San Francisco and Portland.

As to which destination is higher, San Francisco is, if you are speaking of originating territory on our lines, on the Oregon Short Line and O.-W. R. & N.

Q. Now when that difference in rate is taken into consideration in connection with the prices set forth on this table, is the San Francisco market, generally speaking, any higher than the Portland market?

A. Generally speaking it is higher.

Q. When the rates are taken into consideration?

A. I understand. Generally speaking the Portland market is higher; that is, the price is higher at the Portland market
1546 when you take the rate into consideration. The rate is higher of course to the California market.

Q. I notice on this table there is no dollar sign, but I assume all of these figures here reflect dollars in the different columns, in Exhibit 56—dollars per hundred pounds?

A. Dollars per hundred pounds, or cents per pound. It would be about the same. We quote livestock, on the hoof, dollars per hundred pounds. (2873.)

Q. Now I wish you would relate what importance the Portland livestock market bears to this general northwestern community as a livestock market. Is there any other livestock market comparable with it north of San Francisco?

A. No, sir; there is not. We have other livestock markets in the northwest where there are meat packers. We have no other livestock market really in the northwest other than Portland; we have packers in Tacoma, Seattle, and Spokane. They buy considerable in the market and they have buyers in the interior who buy direct.

Q. What I am trying to develop is whether this is a livestock clearing house market comparable, expect in volume, to Kansas City and Omaha and Chicago and Denver, in a smaller way?

A. It is. A great deal of the livestock originating in the northwest territory flows through this market to the Puget Sound markets. In fact, a producer, or a commission man, can bring his stock here, and if the Portland market is not satisfactory he can sell it to a buyer from Tacoma or Seattle and divert it at the balance of the through rate. We have the (2874) diverting in transit privilege at the balance of through rate applying through Portland to Puget Sound. I can't say positively whether there is an extra charge for the diversion privilege on livestock, since I haven't looked at the tariff recently to see, but I am pretty sure there is not.

1547 I have a statement showing the carloads of livestock interchanged between the O.-W. R. & N. and the Southern Pacific Company at Portland for the years 1926 and 1927. The interchange takes place on the east side.

(The statement so offered and received was thereupon marked "Defendants' Exhibit No. 57, Witness Lounsbury.")

Commenting on this Exhibit No. 57, I have prepared (2875) a statement showing number of carloads of livestock interchanged between the Oregon-Washington Railroad & Navigation Company and the Southern Pacific at east Portland for the years 1926 and 1927. That shown under heading "Switch" on the Received column is the number of cars switched from the Southern Pacific interchange to the north Portland yards and those on the delivered statement are the number of cars switched from the north Portland yards to the Southern Pacific interchange.

On Exhibit 57, the initials "T. C." under Marengo stand for Transcontinental. U. P. stands for Union Pacific Railroad Company.

With regard to the gateways: the transcontinental gateway at Marengo is the Milwaukee. (2876.) Plummer is the Milwaukee. Marengo is in northeastern Washington; Plummer is in northern Idaho and Wallula is the point of interchange with the Northern Pacific.

"O. S. L." is the Oregon Short Line Railroad Company.

Q. Do you know of the livestock delivered to the Southern Pacific, whether any of that is destined to the packing houses at Salem, or any of the other valley or western Oregon points?

A. Some of it may be. There is a packing house at Salem. I think there is a small one at Albany.

The livestock delivered to the S. P. goes to any point on the Southern Pacific south of Portland, California, and Oregon.

1548 The Portland livestock market is served by the O.-W. R. & N. and there are joint tracks of the Portland, Spokane & Seattle and O.-W. R. & N. serving the Portland yards. (2877.)

Comr. McManamy. What I was trying to develop is, is it reasonable to assume that the livestock delivered to the O.-W. R. & N. by the S. P. is consigned to the Portland stockyards?

A. That that is marked "Switch," yes.

Q. (By Mr. Spencer.) Well, are there any other yards it is delivered to in Portland except the north Portland yards?

A. No, sir; and there is no other railroad to deliver it off of the Southern Pacific other than the O.-W. R. & N.

Mr. Spencer. That is what the commissioner wanted to know, I think.

Comr. McManamy. But the stock delivered to the Southern Pacific by the O.-W. R. & N. is going to some point other than Portland?

A. Yes.

It is not going to the point of the Portland stockyards?

A. No; anything that we deliver is coming from the yards, or coming from some point on the line.

Comr. McManamy. And going to the S. P. & S. for movement to some point on their line?

A. Yes, sir.

"Switch" means local movement, and under the head "switch" delivered to the Southern Pacific would be livestock switched from (2878) the Portland yards to the Southern Pacific interchange at east Portland by the O.-W. R. & N.

Exam. ROGERS. That originates at the Portland stockyards?

A. Yes, sir.

1549 Exam. ROGERS. Now "local" what is that?

A. That would be originating on the O.-W. R. & N.

Exam. ROGERS. That would be between Huntington and Portland?

A. Yes; the O.-W. R. & N. Lines, or it may be in Washington.

Exam. ROGERS. Yes; but it would not be on the Oregon Short Line?

A. No, sir; the Oregon Short Line is shown separately.

Q. (By Mr. SPENCER.) I am wondering whether that is clear or not, Mr. Lounsbury. Do any of these local cars here go through the north Portland yards?

A. Well, yes; they might go through the north Portland yards for feed and rest, yes; but they would be moving through the north Portland yards on through billing and they would be shown as local traffic.

Q. Where the switch is involved there has been a destination and delivery at the Portland yards, hasn't there?

A. Yes, sir; it originates there and we just simply perform a switching service in handling the cars from the yards to the Southern Pacific, if it is delivered to the Southern Pacific. (2879.)

1550 The Southern Pacific does not serve the Portland stockyards. The Southern Pacific can reach the north Portland stockyards only through the O.-W. R. & N. By my statement I mean that the Southern Pacific does not have access with their own rails to this clearing house, this cattle business over there at North Portland. They must interchange that traffic through us. The Southern Pacific rails terminate in the yards of the Northern Pacific Terminal Company at Portland. That is owned and operated by all the lines, that is by the Northern Pacific and the Southern Pacific and the O.-W. R. & N. The Southern Pacific have their industry tracks on the east side of the river. And the roads switch for each other on the east side of the river.

Q. And I asked you whether or not the Southern Pacific had access to the north Portland yards. I didn't mean by their own tracks.

A. Yes, sir.

Q. But whether the business gets in and out of there? (2880.)

A. Oh, yes; they do. I might state that the Southern Pacific break-up yards are at Brooklyn, which is practically South Portland.

Q. In the city limits?

A. In the city limits; and that is where this livestock is usually interchanged, brought down from Brooklyn to the east Portland

interchange with the O.-W. R. & N. and handled by the O.-W. R. & N. over its tracks to north Portland.

Mr. SPENCER. I wonder if the north Portland yards are shown on the exhibit introduced yesterday by the port commission. It perhaps might be of interest in the case.

Q. Well, could you indicate on this map, Exhibit——

Exam. ROGERS. I think that is Exhibit 48, if I am not mistaken.

1551 Q. (By Mr. SPENCER.) Well, the map of waterways and railroads, published by the commission of public docks, where the location is of the Portland stockyards; I mean with respect to railroads, the Columbia River, and so on.

A. The stockyards would be located between Portland and Vancouver, as shown on this map, at the junction of the red and the green lines.

Q. It is on the Oregon side? (2881.)

The stockyards are adjacent to the Columbia River and between the railroad bridge and the highway.

Exam. ROGERS. Referring to the lower part of the exhibit, do the Southern Pacific switch engines go over to the yards and get the cars you have shown under "switch"?

A. No, sir; they do not. The Southern Pacific, as I stated, has its break-up yards in Brooklyn. The O.-W. R. & N.'s break-up yards are in Albina on the east side. They deliver traffic to the interchange track at the east end of the steel bridge. The Southern Pacific brings stock to the east Portland interchange; we take it with our engine over to the stockyards; and vice versa, we would bring it with our engine from the stockyards to the point of interchange and they would have an engine there to take it.

The Southern Pacific doesn't go into the north Portland yards. They might at times run as far as our yards at Albina, but they would not go beyond that. Now, I might say that there are several switching districts in Portland known as Portland, which are the west side, east Portland (2882), south Portland, Albina, Kenton, and Linnton, the latter being served by the Northern lines, and all railroads entering Portland practically have access to this entire switching district.

1552 Mr. SPENCER. That is, to the north Portland yards?

A. Yes, sir; well, the Northern lines, through the S. P. & S., serve the stockyards direct.

Q. Well, what is the operation over there? Is there a rotation, under which one road operates for one period and another the other?

A. Yes, sir; as between the S. P. & S. and the O.-W. R. & N. The yards are served by a joint track, and for a period of three or six months the O.-W. R. & N. will perform the switching, and for a period of three or six months the S. P. & S. will perform the service on the joint tracks that serve the yards. It is an intraplant operation. The packing houses are in the yards in that same territory; also the slaughter houses.

The Southern Pacific does not do switching at any (2883) time. They do not reach the yards. But their traffic moves in and out of there just as freely as our does.

Exam. ROGERS. What I was interested in is, whether it may not properly be said that the O. W. was giving the S. P. this traffic, or whether it was just simply performing a switching service for the Southern Pacific in getting it out of the Portland stockyards.

The WITNESS. That is traffic in which the O.-W. R. & N. has no interest other than as a switching carrier. By that I mean where the traffic is under the heading "switch."

Q. (By Mr. SPENCER.) But the other originates on the O.-W. R. & N.?

A. That marked "local" originates on the O.-W. R. & N.

Mr. SPENCER. It is cleared up now, I believe.

The Malheur County producing territory is tributary to Portland, Tacoma, and Seattle markets, and it is only in exceptional cases
1553 where the California packer can (2884) pay sufficiently more to justify the difference in freight rates that will attract any appreciable movement to California markets. The present route from Malheur County points to Los Angeles is shorter via the Union Pacific through Salt Lake City than via the proposed cross-State line and Southern Pacific.

In 1926 there was no movement of butter in carloads from points on the Brogan and Oregon Eastern branches.

The rate on butter, eggs, and dressed poultry of $1.64 per 100 pounds from Payette and Nampa, Idaho, to San Francisco, is the same via Portland as in effect via Wells and Ogden in straight or mixed carloads, and in connection therewith storage, grading, or repacking in transit is permitted on the Oregon Short Line and is also permitted at Portland and Pendleton, Oregon, on the Oregon-Washington Railroad & Navigation Company.

These are commodity rates and in my opinion nothing less would be applied for movement via the cross-State line. The refrigeration charges are likewise the same, namely, $55.00 per car.

Exam. ROGERS. Your refrigeration charges are not (2885) blanketed like your transportation rate, are they?

A. For through refrigeration, yes.

Exam. ROGERS. Are they based on cost of service?

A. They are published in the protective tariff used by all lines and show the charges between different districts locally in one State and from one State to another State, and also the charges where the shipper performs the initial icing and buys the ice. (2886.)

Exam. ROGERS. What I am getting at, under the basis of charges under the perishable protective tariff is it your thought that a distance of three or four hundred miles wouldn't make any difference in the charges?

1554 A. No, sir; and I might illustrate that. We have the short line from here to Wallace, Idaho. By "we," I mean the Oregon-Washington Railroad & Navigation Company. The North-

ern Pacific meet those rates by their long line through Paradise, Mont., under relief from the commission. The long line meets the short line rates. The charge is just the same both ways.

Exam. ROGERS. I was under the impression that the basis for the perishable protective tariff was purely and simply the cost of service.

A. You can ship a car of perishable freight from here to Granger, Wyoming, via Roseville or direct, at the same perishable charge.

Wheat: Mr. Teutsch estimates 9,410 tons available for westbound movement via cross-State line from Malheur County. In 1926 the total movement from off Brogan and Oregon eastern branches westbound was 2,464 tons, which moved entirely to Oregon destinations, and by Oregon destinations there I mean westbound through the Huntington gateway to Portland (2887) at the final destination.

The movement of wheat from southern Idaho to the coast depends very largely upon the crop production in the Northwest. In the event of a large wheat crop in the Northwest the movement from southern Idaho is small, but when there is a light crop in the Northwest the movement from southern Idaho shows a substantial increase, particularly of soft wheat, which is required for mixing purposes by the mills and for export.

The difference in distance to Portland in favor of the Huntington route will continue to hold the movement to the main line.

1555 Furthermore attention is called to the fact that under the Oregon Short Line tariffs the rates to the coast are higher on flour and mill feed than on the wheat. It is not likely that any mill feed will move from southern Idaho to western Oregon.

In compliance with an order of the Public Service Commission of Oregon, tariff effective March 1, 1927, the railroads in this State are required to carry intrastate distance rates on grain and articles taking grain rates, potatoes, onions, hay, and straw, applicable for single line haul and for joint line haul, the rates for single line haul being slightly less than for joint line haul.

I have prepared a memorandum showing wheat rates from (2888) representative producing and shipping points The Dalles and east in Oregon and Salem and Eugene as compared with present rates from Ontario, Vale, Brogan, Riverside, Crane, and Burns to Portland, via Huntington and via Crescent Lake.

(Said statement was thereupon received in evidence, marked "Defendants' Exhibit No. 58, Witness Lounsbury.")

The figures via Crescent Lake, No. 1, being the intrastate rate for joint line haul, and the figures in the last column being combination on Crescent Lake. The rate via Huntington to Portland is a one-line haul.

Comr. MCMANAMY. Well, is that considered a one-line haul with the Burns branch operated by the Oregon Short Line Railroad? Burns to Portland?

A. Well, at the present time the intrastate rate is not effective from Burns to Portland, because that is an interstate haul. It

would be, strictly speaking, a two-line haul. And from Burns to Ogden would be a one-line haul, under the present system of operation.

1556 Exam. ROGERS. Well, this rate from Burns to Portland as via Huntington, is that a joint rate?

A. No, it is a through rate; a through rate, the same as the rate from Ontario would be a through rate, except that the (2890) rate from Burns is higher and made by an arbitrary over Crane.

Exam. ROGERS. Well, it is a joint rate, then, between the Oregon Short Line and the Oregon-Washington Railroad & Navigation Company?

Exam. ROGERS. But by Crescent it is a combination of locals?

A. Well, I have shown both the Oregon State intrastate scale for a joint line haul, as well as the combination on Crescent Lake, and when I prepared this statement there was some question in my mind whether or not the continuous intrastate distance rate would apply. I had in mind the fact that since the Great Northern has extended their line from Bend to Klamath Falls there is no joint haul application of those rates between the Great Northern and the Southern Pacific.

Mr. SPENCER. What I think the examiner wants to develop is purely what this Oregon tariff, provided it is continued for movement over two or more lines—what particular feature you had in mind in referring to it. Does it provide for the through movement of all of these commodities and allow the roads involved a small arbitrary if there are more than two roads involved?

A. Yes, just an arbitrary of ——. (2891.)

Q. Well, they are all, in effect, joint rates, are they not?

A. Yes, sir.

Q. Pursuant to order of the State commission?

A. Yes, sir; but another purpose in showing this statement which I think I am going to refer to here is the fact that the

1557 wheat rates are so much lower from the Columbia River wheat producing section, The Dalles and east, to Salem and Eugene than any possible rates that would apply on any basis from eastern Oregon and from the Burns district to southern Idaho.

There is no tariff establishing a rate from Burns via Crescent. We constructed that rate on the combination of locals at Crescent Lake.

Comr. MCMANAMY. How would you establish the rate from Burns to Crescent, on what basis?

A. On the basis of the one-line haul.

Comr. MCMANAMY. Mileage?

A. Yes.

Comr. MCMANAMY. Distant basis?

A. Yes. I might add that that shows the difference between what one line earns under this tariff for a single-line haul and what they have to divide when they (2892) carry the continuous mileage for a joint line haul, under this Oregon tariff.

Referring to Exhibit 58, the figures in the rate column are in cents per one hundred pounds.

The United States Department of Agriculture shows the wheat production in western Oregon for the year 1927, 4,403,900 bushels; for eastern Oregon 22,377,325 bushels.

There are a number of flour mills located at points in western Oregon, whose principal supply of wheat is obtained locally. They do buy and ship some hard wheat from eastern Oregon which is used for mixing and blending purposes.

During the year 1927 the O.-W. R. & N. delivered to the Southern Pacific at east Portland, wheat 43 carloads, barley 37 cars, and oats 1 car.

It is manifest that the millfeed used in the dairy industry in the Willamette Valley is now being purchased locally, there-
1558 fore it is not practicable to assume that there will be any wheat shipped from Malheur County via the proposed cross-State line to western Oregon. (2893.)

Apples: Mr. Teutsch estimates 138 cars, or 2,346 tons. During 1926 from off the Brogan and Oregon eastern branches there were 62 tons to southern California. This tonnage would not move via cross-State line.

There would in all probability be no movement from Malheur County to San Francisco in competition with apples from Rogue River, Hood River, Yakima and Wenatchee Valleys moving to the coast thence via water at much cheaper rates. As a matter of fact the California markets can not begin to consume the apples produced in that State, amounting to over six million bushels.

Potatoes: Mr. Teutsch estimates 174 cars, or 3,132 tons. There was no movement from Brogan and Oregon eastern branch points to California in 1926.

In order to show the relative rate adjustment on potatoes to San Francisco and Los Angeles, I have prepared a statement showing rates from Boise, Payette, Idaho, and Ontario, Oregon, as compared with rates from Yakima Valley, Redmond, Oregon, on the Des Chutes branch, from Woodburn and Eugene in western Oregon and from Klamath Falls and Crescent Lake, and from Portland.

(Said statement was thereupon received in evidence, marked "Defendants' Exhibit No. 59, Witness Lounsbury."

A. By rail and water I mean to Portland, and by the regular established steamer lines to San Francisco.

Exam. ROGERS. When you refer to the California apples, do you have in mind that because California didn't consume her own apples that there wouldn't be any movement of apples into California?

1559 A. No, sir; I just mentioned that as one factor in connection with the fact that the California market was pretty well supplied from Rogue River, from Hood River, and Yakima and Wenatchee Valleys, which have much lower rates and just as good

apples, and I might say, too, that the apple rates compared relatively with the rates on potatoes, but I will get to the apple rates later.

Exam. ROGERS. All right. But, as a general proposition, Mr. Lounsbury, is it true that when a local territory produces enough of any commodity or any article to supply that territory, that that has any significance as to whether there will be a movement of the same article or commodity from other territories into that territory?

A. Well, I don't think any of the Montana or Dakota mines ship coal into Utah. (2895.)

I believe Yakima and Hood River ship apples to the Shenandoah Valley and Washington, D. C.

Exam. ROGERS. That is just the thought in my mind. Take the Shenandoah Valley, there are enough apples produced in that valley——

A. They pack apples in barrels and they ship them out, and after a certain period they are gone, and I don't understand that in the Shenandoah Valley they store them the year around like they do out here; store these boxed apples in cold storage.

Comr. MCMANAMY. That once was true, but no more.

A. Now, take the New York market; New York is the second largest producing State of apples in the United States, but there are more Washington apples sold in New York than there are of New York.

1560 Exam. ROGERS. Take down where I come from, they manufacture a lot of furniture, but that furniture is shipped out of the State, and furniture from out of the State shipped into the State, and I was wondering if that was your impression of the general situation?

A. Well, I don't think the furniture would be comparable to fruit, Mr. Examiner; we have furniture factories here, and the (2896) great bulk of their product is shipped out.

With respect to potatoes, which I am now discussing, we have had prices so low on potatoes that in these very rich valleys right around Portland the growers wouldn't dig them, because they couldn't get enough to pay the cost of even digging and packing them and putting them into market.

There is no movement westbound, transcontinental, of New York apples to the Pacific coast. There are no shipments of apples into the distinctively apple-producing districts, like Hood River Valley or Yakima Valley or Wenatchee or Rogue River; they sell their own product locally.

Exam. ROGERS. I thought you were making the point that because California produces more apples than they consume that there wouldn't be any movement of apples into California.

A. No; I just used that as a factor. What I had in mind was that the production of apples produced in California, a certain portion of those apples will be consumed in California by the California market, and they would naturally use those apples which

could be obtained at (2897) much cheaper freight rates, consume those, before they went somewhere else to get them, unless they could get them cheaper from some other district.

I think Exhibit No. 59, rates on potatoes, speaks for itself.

1561 The rate from Yakima on potatoes to San Francisco is 36½ cents and 60½ cents to Los Angeles. These rates via Crescent Lake are a combination of the locals. The others, meaning from such points as Yakima and all of the points of origin mentioned there, via different gateways, are through rates, except, of course, the rates shown from points south of Portland on the Southern Pacific would be one-line haul rates, and the rate from Portland via the steamer line is a local rate. I have shown here the steamer line rate from Portland to San Francisco, in the last column, which is 25½ cents, and from Portland to Los Angeles, which was 40½ cents.

Exam. ROGERS. But you take your rate from Boise, the distance (2898) by Crescent is less than via Portland or via Wells to San Francisco?

A. Yes.

Q. Now, is there any more reason for expecting that the combination of locals would be applicable via the Crescent Lake route than via the Portland or Wells route?

A. Well, in the course of time the rate via the Crescent Lake route would probably be equalized, but that doesn't mean there would be any particular movement via that route.

Exam. ROGERS. No, but how do you account for the difference between the eighty-five per cent rate on the Portland gateway and the sixty-two per cent rate on the Wells gateway?

A. Simply because the movement and the service, I think, has in the past taken the business that way. I don't believe there is any significance to the difference in distance.

1562 I have not shown the rates to Los Angeles under heading via Crescent Lake as such rates would be made by adding locals over (2899) San Francisco. That is the usual basis. Mr. Teutsch shows, Exhibit 1, page 5, Harney County.

Estimate of present agricultural tonnage available for movement over proposed cross-State railway westbound as follows:

Sheep	870 tons,	93 cars.
Cattle	5,902	473
Hogs	269	27
Wheat	1,530	37
Horses	230	20 cars; or
Total available of	8,801 tons,	650 cars.

The actual movement of these commodities from Crane and Burns and intermediate points to all destinations for the year 1926 was as follows: (Crane and Burns are the only shipping points in Harney.)

Sheep, 2,391 tons, 213 cars; cattle, 5,081 tons, 392 cars; hogs, 3 tons, 1 car; wheat, 281 tons, 8 cars; horses, 512 tons, 37 cars.

The principal market for sheep is in the East, although he estimates 25 per cent moving to California over the (2900) proposed cross-State line.

In reply to inquiry from Mr. Spencer, Mr. Teutsch stated that the livestock from the Canyon City district north of Burns was being driven to Seneca and shipped over the line between Seneca and Burns, and that there was no movement to speak of via the Sumpter Valley Railway operating from Prairie City to Baker, Oregon. I have obtained from the general freight agent of the Sumpter Valley Railway statement of movement for 1926 and 1927 from Prairie City and other points on his line to Baker as follows:

1563 1926: From Prairie, cattle 200 cars, sheep 82 cars, horses 2 cars; from Austin, cattle 19 cars, sheep 25 cars; from Tipton, sheep 20 cars; from Whitney, sheep 5 cars; total, cattle 219 cars, sheep 50 cars, horses 3 cars.

1927: From Prairie, cattle 154 cars, sheep 32 cars; from Austin, cattle 18 cars, sheep 26 cars, horses 1 car; from Tipton, sheep 15 cars; from Whitney, cattle 1 car, sheep 35 cars; total, cattle 173 cars, sheep 108 cars, horses 1 car.

The Sumpter Valley Railway is a narrow-gauge line. (2901.) I haven't the figures showing how many cars for one standard gauge car. I wouldn't like to make a guess of it. I would rather leave it to you. There would be a difference between a narrow and standard gauge. How substantial I wouldn't say.

Taking up Exhibit 26, Hal. F. Wiggins, pages 1 to 36, headed "All commodities—Transcontinental—By commodity groups," showing total carloads and total tons of all commodities moving between points on Southern Pacific Company's lines in Oregon and the various States and countries listed via Portland, via Ogden and other junction gateways for six months of 1926 and multiplied by two to arrive at the total for the year 1926. (2902.)

Page 36 gives the total percentages of the commodity groups from which it is shown that agricultural products comprise 8.28 per cent and lumber and forest products 82.26 per cent, these two commodity groups comprising over 90 per cent of the total movement.

In his exhibit 28, pages 1 to 3, showing estimated tonnages and revenues created by proposed cross-State line in Oregon

1564 for the first year, under heading "Eastbound traffic," Mr. Wiggins has taken the agricultural products listed in Mr. Teutsch's Exhibit 1 for the western Oregon counties, Lane, Douglas, Linn, Benton, Lincoln, Coos, Curry, Josephine, and Jackson, namely, apples, pears, prunes, walnuts, canned goods, eggs, broccoli, cherries, berries, bulbs, dried fruit, dressed poultry, and seeds.

We do not have any record of origin by counties of the above commodities moving from Southern Pacific-Oregon lines to transcontinental territory via Portland and O.-W. R. R. & N., but a check of our east Portland interchange of carload commodities above listed received from the Southern Pacific-Oregon lines from all counties

served by the Southern Pacific south of Portland for the years 1926 and 1927 are shown on the statement submitted as next exhibit, Exhibit 60. (2903.)

(Said statement was thereupon received in evidence marked "Defendants' Exhibit No. 60, Witness Lounsbury.")

The 1926 statement shows a total of 1,246 cars of the commodities named received from Southern Pacific, of which 271 were in switch movement principally to docks for forwarding by water, 90 local, 831 to destinations on the Oregon Short Line, Union Pacific and east thereof, and 54 moving through short-haul gateways, that is, via Marengo and Plummer thence Milwaukee, or through Spokane either in connection with the Great Northern or the S. I., C. P., and Soo line.

The 1927 receipts of the commodities listed show a total of 1,056 cars, of which 356 were switch movement to docks for loading to ships, and so forth.

I might here state that there might be a few of those cars go
1565 to wholesale houses at Portland, but they would be very small in comparison with the total switch movement, as most of that is switched from the interchange to the docks, and by docks, I mean the docks not served by the Southern Pacific lines but where we perform the switch.

Explaining the various headings, "Switch" means that the Oregon-Washington Railroad & Navigation Company (2904) merely performs a local switch from the Southern Pacific interchange at Portland in connection with those cars. By performing the interchange, I mean, the Southern Pacific from which we take the traffic, delivers it to the docks that are served by the Oregon-Washington Railroad & Navigation Company, or to some industry that may be served by the Oregon-Washington Railroad & Navigation Company, but as previously explained, that would be very small.

Q. Well, where is the real terminal where the bulk of this stuff goes?

A. St. Johns. It is the Municipal Terminal No. 4 at St. Johns, which is served by the Oregon-Washington Railroad & Navigation Company tracks. We do the switching there for all lines.

Comr. McManamy. What does this "East of Missouri River" indicate? (2905.)

A. All destinations east of Missouri River.

Comr. McManamy. Via any line?

A. That is delivered to any line by the Union Pacific at Council Bluffs.

Comr. McManamy. And these shipments come from points on the Southern Pacific lines in Oregon?

A. Yes, sir; through the Portland gateway.

Comr. McManamy. Then I notice under the heading "Prunes" there are 48 cars in 1926 shipped to points east of the Missouri River?

1566 Yes, sir; those prunes came from Southern Pacific lines in Oregon. In 1927 there were 76 cars of dried prunes shipped to points east of the Missouri River. I might state that our interchange does not show dried or green, but I doubt if we have had any considerable amount of (2906) green prunes. I don't recall any particular movement.

Comr. McMANAMY. You have 293 cars of broccoli. Forty-three cars of cherries.

A. Yes. Those all move by express, and would continue to move by express by through limited trains, to points east of the Missouri River.

Comr. McMANAMY. And in 1927, 69 cars of cherries.

A. Yes, sir; all by express. They all move by express, and they would naturally come in here to take the Chicago Limited train.

Exam. ROGERS. Well, why don't the Southern Pacific take them down the other way?

A. Because of the quicker movement. These shipments of cherries by express, time is a very important factor in connection with those, naturally. They can't even ship them in refrigerator cars. Now, we have a heavy cherry movement from The Dalles and Hood River east. They all move by express, too, just the same.

Exam. ROGERS. I was thinking about all that movement on your exhibit. (2907.) They all seem to be from Southern Pacific originating territory, delivered to the Oregon-Washington Railroad & Navigation Company at east Portland. Of course, the switch and local movement, that must come this way.

A. Yes, sir.

Exam. ROGERS. But to the points east of the Missouri River why wouldn't the Southern Pacific take that over their line?

A. Over the cross-State line?

1567 Exam. ROGERS. No, down through Roseville or the Alturas route. Is it because the shipper routed it this way?

A. Yes, I think so, either because the shipper or consignee routed it via the Portland gateway. I think the Southern Pacific would have been glad to take it via Ogden. (2908.)

(Continuing.) O.-W. heading means local and points on the Oregon Railroad & Navigation Company; O. S. L. local means points on the Oregon Short Line; U. P. local means to points on the Union Pacific Railroad; east of Missouri River is all destinations east of Council Bluffs; west of Missouri River is destinations to points where the car was delivered at a junction point west of Council Bluffs and was not carried through Council Bluffs; Marengo Transcontinental means delivered to the Milwaukee at Marengo, Washington; Marengo other than transcontinental means local points on the Milwaukee; Spokane transcontinental has reference to delivery principally to the Spokane International, C. P. and Soo Line; Spokane other than transcontinental might be delivered to any lines beyond Spokane local; Plummer other than transcontinental would be Milwaukee local.

Q. Now, right in that connection, you say this Exhibit 60 reflects the business in these different specified commodities received by the O.-W. R. & N. Company at Portland from all points in western Oregon on the Southern Pacific lines?

A. Yes, sir.

Q. Now, are those commodities produced in greater volume from the counties that were not included in the list you mentioned by Mr. Wiggins, or in Mr. Wiggins' testimony, than in the counties he did include?

A. Absolutely, yes. The great bulk of the production of the (2909) prunes, canned goods, and the cherries is in the counties north of Linn County.

1568 Q. Well, the pears and broccoli would be produced south of Eugene, I assume?

A. Yes, sir; I intend to deal with these individually later.

Exam. ROGERS. You may be coming to it; if you are we won't bother with it now; but can you tell us about the origin of these various commodities?

A. Well, I can tell you principally. As I stated at the outset, the interchange report does not show the point of origin. I took these figures off the interchange report, but I have a pretty general knowledge of western Oregon, and I think, after I get through, I can answer most any question.

The 1927 receipts of the commodities listed show a total of 1,056 cars, of which 356 were switch movement to docks for loading to ships, etc., 166 local, 481 to Oregon Short Line, Union Pacific and east thereof, and 53 cars moving through Marengo, Plummer, and Spokane gateways via Northern lines.

Attention is called to the fact that of the apple movement from western Oregon through the Portland gateway in connection with the Oregon-Washington Railroad & Navigation Company for the year 1927 out of total of 90 cars, 46 were (2910) switched at Portland terminals, 32 moved locally, 1 to destination on the Oregon Short Line, 4 to destinations on the Union Pacific, and 7 to east of Missouri River.

There was no movement of pears through the Portland gateway, either in 1926 or 1927. This commodity may have been shown under heading "Fruit N. O. S."—and also green prunes may have been shown on the interchange under that heading—of which a total of 18 cars moved to destinations through Huntington in 1926 and

1569 15 cars in 1927. That is all of the fruit that moved under the heading "Fruit N. O. S."

Prune receipts: Our interchange does not make any distinction between green and dried prunes, but the movement of prunes from from Oregon points generally consists of dried products. Of the prune receipts through the Portland gateway totaling 217 cars for 1927, 100 were switched at Portland, 10 moved local on the O.-W. R. & N., and 95 moved east through the Huntington gateway.

In my mind the switch movement has bearing on whether or not they are dried on fresh prunes, if I did not otherwise know. The entire switch movement would be dried prunes.

That is both for export and for shipment to the Atlantic coast. (2911.)

Q. Well, you stated that this movement of prunes from Oregon points generally consisted of the dried product; is that true of the Milton and Freewater prunes?

A. Well, I am dealing with the western Oregon here.

Walnuts: Statement shows 10 cars, of which 4 moved to transcontinental destinations, 3 via the Union Pacific through Huntington.

Canned goods: Statement shows that heavy percentage moves to Portland to be switched to docks for movement by water. Out of a total of 387 cars but 64 moved to transcontinental destinations via the Union Pacific system.

Now with respect to these prunes and canned goods, I have obtained from the records from the port of Portland, which is contained in their annual report, the amount of dried prunes and canned goods exported for the years 1926 and 1927.

1570 Dried prunes, 1926, foreign 17,198 tons, domestic 10,359 tons; 1927, foreign 19,407 tons, domestic, 9,694 tons.

Canned goods, including fruit and vegetables: 1926, foreign 12,821 tons, domestic 36,712 tons; 1927, foreign 10,987 tons and domestic 40,564 tons.

With respect to these commodities moving via water through the port would state that they are being moved by truck as well as by rail and electric line from as far south as Roseburg on the Southern Pacific and The Dalles on our line (2912) east of Portland. That includes canned goods as well as prunes.

There were no eggs routed through Portland and the Oregon-Washington Railroad & Navigation Company. The packing houses where the eggs are assembled and packed are located on the Oregon Electric at Eugene and Albany, the county seats of Land and Linn counties, with the result that this movement is via the Oregon Electric and the Northern lines.

It will be noted that the movements of broccoli for 1927 shows a very heavy decrease as compared with the year 1926.

Receipts from the Southern Pacific at Portland for the year 1928 were 163 cars, of which 152 moved east via Huntington, showing further decreases in 1928 under 1927.

Comr. McMANAMY. How does it compare for a period of two years? What do you think that indicates?

A. What, in connection with the broccoli?

Comr. McMANAMY. Yes. You are directing especial attention to it; what do you think it indicates generally?

A. I think it indicates a very uncertain condition in order to estimate a movement of the average or annual production to go across the cross-State line. I don't think that you can

1571 estimate what next year's broccoli crop will be, by any means, other than to know what acreage has been planted and then guess on the weather, the same as the grower has to do.

Exam. ROGERS. When does the broccoli movement ordinarily take place?

A. In the spring of the year. It starts usually late in February, early in March. The movement is usually very rapid. It is usually over in about 30 days or six weeks; it may take a little longer, perhaps two months. I was down there this season during the shipping season and I talked with some of those growers, who are very much dissatisfied with the results that they were obtaining this year and I know that those growers are dissatisfied with the broccoli business as a result of returns. The man with whom I conversed was a member of the association and had a wonderful crop.

1572 Exam. ROGERS. The point I was making about the broccoli, Mr. Lounsbury, was that your figures for 1928 covered the entire movement for 1928?

A. Yes, sir; the movement is over now, and the receipts report, as I stated, moved east via our line, shows 163 cars, of which (2915) we had 152 as compared with the two previous years.

Now as I stated, the figures in the exhibit include all of the receipts at east Portland from all of the counties served by the Southern Pacific in western Oregon, and with respect to prunes, walnuts, canned goods, and cherries, the heaviest production is in the counties north of Linn County.

On page 36 of Mr. Wiggins' exhibit the total eastbound movement of agricultural products through Portland for the year 1926 originating on the Southern Pacific-Oregon lines destined to transcontinental points was 982 cars, of which 824 cars of commodities listed in my exhibit moved to transcontinental points via the Huntington gateway. In 1927 the movement via Huntington was 569 cars. The Portland gateway is open to the other lines, and in Wiggins' statement undoubtedly there would be shipments that may have been routed via the Northern Pacific or Great Northern, or the S. P. & S. and the Northern lines out of Portland, as through rates apply by those lines as well as via the O.-W. R. & N. and the Union Pacific.

Under heading livestock, in Mr. Wiggins' exhibit, page 36 is shown a total of 7 cars eastbound and 4 cars westbound via the Portland gateway. I note on page 7 one car eastbound and one car car westbound to and from Illinois, and on page 33 one

1573 car westbound—one car eastbound and one car westbound to and from Idaho, which would indicate that this stock is (2916) moving to and coming from exhibitions.

An examination of our interchange records showing the number of carloads of livestock interchanged between the O.-W. R. & N. and the Southern Pacific Company at east Portland for the years 1926 and 1927 is covered by the exhibit already introduced, Exhibit 57. Referring to this interchange, there is some livestock received by the

Southern Pacific that originates in California and is cleared through the Portland market at north Portland. At certain seasons of the year, that is a frequent transaction. There is a movement from California, not only for north Portland but Tacoma and Seattle, that is cleared through north Portland, going to Tacoma and Seattle, where there are packing houses. The Carstens Packing Company at Tacoma and Frye & Company at Seattle.

Under list of westbound transcontinental traffic on page 56, moving via Portland, Mr. Wiggins shows under the agricultural group 436 cars, which undoubtedly consist of corn and other grains for feeding purposes.

Looking over the recapitulation, shown on pages 33 to (2917) 36, inclusive, it will be noted from Exhibit 26 that there were 206 cars of agricultural products from Nebraska, 51 from Iowa, 1 from Kansas, 8 from Minnesota, 23 from South Dakota, and 57 from Montana.

The O.-W. R. & N. delivered to the Southern Pacific at east Portland during the year 1927, 246 cars of corn for all points on the Southern Pacific lines in western Oregon, indicating that considerable movement of these agricultural products reach Willamette Valley via the Northern Pacific.

1574 Another item shown on page 36 of Mr. Wiggins' exhibit moving westbound via Portland under Group 3 is products of mines. He shows 222 cars for a six-months period. In the year 1926 coal from Utah and Wyoming amounted to 248 cars.

Q. So that 248 should be compared with 444 given by Mr. Wiggins; is that right?

A. Yes, sir; well, his 444 is everything. I am just showing that under that heading we handled 248 cars of coal.

Exam. ROGERS. Mr. Lounsbury, if I may interrupt you, did you find in Mr. Wiggins' exhibit what you would term inaccuracies or incorrect statements, or is what you are saying in explanation and to go with Mr. Wiggins' exhibit, just as a general observation?

A. Mr. Wiggins' exhibit shows the entire movement east and (2918) westbound from off the Southern Pacific-Oregon lines for the year 1926. The purpose of my statement is to show what the Portland gateway and O.-W. R. & N. handled during the year as compared with the actual showing of six months and an estimate of another six months. In other words, I am showing against his figures the O.-W. R. & N. actual movements through the Portland gateway of the commodities that he principally deals with.

Now, I am not in position to say whether there were any inaccuracies in that statement, because I don't know the originating point of this business on the Southern Pacific. I don't know the destination of all of it that might have moved, or what did move through the Portland gateway via other lines or other routes.

1575 Exam. ROGERS. I gather from that, then, that your major comparison would be the six months for which Mr. Wiggins made estimate?

A. No, sir; my comparison is by years. And he took six months' actual figures and multiplied those by two to get the year, I understand.

Exam. ROGERS. What I am getting at is, would his error be in the estimate for six months? Could he be in error?

A. Why, absolutely there could be an error. If he missed a seasonal movement of some particular commodity in his alternate (2919) months, then he might not get any of that commodity in his statement, or, on the other hand, if he caught a seasonal movement one month or two months it could not move during the balance of the six months, and if he multiplied that by two his figures would be wrong. As, for instance, broccoli. Broccoli would take the first six months, and if he multiplied that by two he would get an error.

Mr. ELLIS. It should be understood here that the six-months basis was used by Mr. Wiggins after a stipulation with the Southern Pacific to the effect that by multiplying it by two he would get an accurate showing of the year's traffic, that is a fairly accurate showing.

Mr. DEY. Fairly accurate. If a thing is accurate, it is accurate, of course. In order to save a tremendous expense—even the six months ran into a lot of money to get this up—we agreed to the introduction of this testimony, with the understanding that by alternating the months and then (2920) multiplying by two we would reach a fairly representative or fairly accurate statement.

1576 Mr. SPENCER. A very important consideration, as I gather is that Mr. Lounsbury's analysis shows that of this business a substantial part moves in connection with other transcontinental lines and there is every reason to assume that they would continue to participate in that business. That is the purpose.

The WITNESS. Another purpose is to show the distribution of the traffic which we received from off of the Southern Pacific-Oregon lines from the valley, having in mind, as I proceed in this illustration, that our friend, Mr. Teutsch, has taken it all and given it to us over the cross-State line, and I will get to that later.

With respect to lumber and forest products moving eastbound to transcontinental destinations, as listed on page 50 of Mr. Wiggins' exhibit, it will be noted that 1,044 cars moved via the Portland gateway, which should be doubled, making a total of 2,088 cars originated in territory Marion County and north equidistant via Portland or proposed cross-State routes. This would make 38 per cent of the total via Portland, as shown in the first column of the statement.

Now on page 51 of this exhibit Mr. Wiggins shows the distribution of forest products to transcontinental destinations by States. It should be noted that in this statement he has shown the States of Idaho, Montana, and Utah, which are not transcontinental destinations. I have, therefore, included these States in my next exhibit. (2922.)

(The statement was thereupon received in evidence marked "Defendants' Exhibit No. 61, Witness Lounsbury."

1577 The WITNESS. Showing the distribution of lumber by States of destination originating at all points on the Southern Pacific-Oregon lines moving via Portland, O.-W. R. & N. and connections for the year 1926, which shows via the Huntington gateway a total of 2,395 cars, via Marengo and C., M., St. P. & P. 694 cars, via Spokane, S. I., C. P. and connections 289 cars, and via Spokane and Great Northern 13 cars. Were we to deduct 35 per cent to cover that portion originating at mills in Marion County and north above referred to it would leave 1,572 cars, which might represent that portion originating south of Marion County.

In his cross-examination Mr. Spencer referred to the figure of 719 cars shown on page 51 of Mr. Wiggins' exhibit for the six months' period destined to Minnesota. It will be noted that my exhibit shows 28 cars via Huntington, 300 via O.-W. R. & N., Marengo and the Milwaukee, 155 via O.-W. R. & N., Spokane for the entire year showing that the balance moving through Portland as shown in Mr. Wiggins' exhibit was routed via other northern lines.

With respect to movement to Montana Mr. Wiggins shows (2923) for six months' period 54 cars as against actual movement via O.-W. R. & N.—Huntington 8 cars, and via O.-W. R. & N., Marengo and Milwaukee 18 cars for the entire year, indicating that the balance moved via northern routes.

In his exhibit, pages 53 to 67, which is not summarized, Mr. Wiggins undertakes to show in some detail statement with respect to movement of forest products listed as logs, posts, poles, and cordwood, ties, lumber, timber, box shooks, etc. All of these commodities are included in the exhibit presented by me under the heading of lumber and forest products.

1578 At this point I desire to state that the routing of lumber from mills located not only in western Oregon but in the Northwest generally is influenced to a large extent by considerations tending to favor the originating line, such as the mill and shipping sheds being served by industry tracks and thereby dependent upon the agent and train crews for satisfactory service in the matter of daily spotting cars for loading:

First: The railroad agent and employes constantly cooperating with the mill operators to take care of their loading requirements. In this connection, I might add at this point that the agent of the railroad, the originating railroad, is a very important factor in the conduct of the mill's shipping business. He, in connection with the mill superintendent or the shipping clerk (2924) anticipates the movement, is in close touch with the orders for cars and keeping the dispatcher advised of the requirements so that the cars can be there for loading and spotted on the tracks for prompt loading, and all of that cooperation, together with the responsibility placed on the

agent for securing the long haul, is a very important contributing factor to the originating lines receiving the long haul.

Second: Transportation of logs and low rates from the timber to the mills, requiring daily and satisfactory service to keep the mills supplied with logs to meet its requirements based upon the general understanding that the manufactured product will move out over the originating line.

Third: And, not of small importance, the dependence of the mill operator or shipping clerk upon the local agent for rates to all destinations so that through the medium of car orders and rate
1579 quotations the agent at the shipping point is familiar with the mill's operations and by reason of the responsibility placed upon him to secure the maximum percentage of tonnage he exerts what influence he can to secure the business. He knows of all orders which the mill has, in connection with which the consignee or brokers request adverse routing. He can immediately put the solicitation machinery to work by telegraphing to the general agent at the eastern point of destination to see the consignee and secure the business, and promptly does. (2925.)

Exam. ROGERS. All of these things you are talking about are what competition does, aren't they?

A. Yes, sir; but it also shows that the originating line serving the industry, whether it is a sawmill or a cannery, or anything else, has a decided advantage. I might add in that connection that we have through rates on apples in connection with the Great Northern from Wenatchee through Spokane and the Union Pacific to points on the Union Pacific as far as Omaha and Kansas City, but we don't get the business.

Exam ROGERS. Didn't you say a while ago in commenting on some of Mr. Wiggins' exhibits, that some of the traffic must have gone the other way because rates were in effect that way?

A. I don't recall any such statement, because the rates on lumber are the same via all routes.

And to further illustrate this point, I recall when I was traveling freight agent of the Southern Pacific on the Oregon lines two prominent men who were putting in a new mill of one hundred thousand feet daily capacity, and I heard that the machinery for that mill was being routed from the East via the Northern Pacific. I went to the owner of the mill and asked him if he really meant as
1580 a business man to route that machinery over the Northern Pacific through the Portland gateway. He said, "Yes, for personal reasons I would like to do that." I replied, "Are you going to (2926) slap the Southern Pacific in the face by routing that machinery via the Portland gateway, over a foreign line that does not serve your mill, and then come around afterwards and ask for rates on slabwood, cordwood, mill feed, and local rates on lumber?" His answer was: "I had not thought of that. I will route that business via the Southern Pacific."

Comr. MCMANAMY. This group rate then only applies on what has been termed transcontinental business, does it not? That is,

for the intermountain country routes the rates are not the same by all routes, are they? There is a territory in there in which they are not?

A. Oh, yes; there is a local tariff naturally, but to Colorado and east the rates are the same. To Utah from western Oregon via Portland or via Ogden the rates are the same.

Fourth: It is the practice of the Southern Pacific as well as the Union Pacific system to purchase their car material, ties, bridge timbers, and supplies of lumber f. o. b. cars on their own rails. (2927.)

The Southern Pacific system is the largest purchaser of lumber mill railroad material in the western Oregon territory and these purchases likewise have a strong effect upon assisting that line in securing the long haul on the routing of commercial lumber from those mills.

Fifth: Large stocks of railroad ties, car material, etc., are purchased from the western Oregon mills by the D. & R. G. W.
1581 and Missouri Pacific, as a result of which this tonnage all moves via the Ogden gateway and the Denver & Rio Grande. In addition thereto these lines are favored by the mills with a large percentage of commercial shipments in order to invite favorable consideration in the matter of future purchases. A considerable portion of the lumber moving east consists of ties, car and railway material purchased by eastern lines in connection with which the purchasing agent of the eastern line controls the routing and designates over what lines it shall be routed.

The Union Pacific system buys its ties f. o. b. O.-W. R. & N. rails, that portion of the ties that are purchased in this territory. They also buy some ties from mills on the Oregon Short Line. But we have a tie-treating plant at the Dalles, and we buy ties f. o. b. our rails——

Exam. ROGERS. I notice in Mr. Buck's exhibit he has ties in (2928) there and applies a freight rate on them of, I believe, $3.21 a ton, as I recall. If those ties originated on the O.-W. R. & N. ~~these lines~~ would that rate be applicable?

A. Yes, sir; on all ties delivered to the Oregon Short Line the Oregon-Washington Railroad & Navigation Company, under the law, receives its freight charges. We can not transport material for any other unit of the system free over the Oregon-Washington Railroad & Navigation Company.

Exam. ROGERS. Then you regard these as Oregon Short Line shipments?

A. I suppose they would be so considered.

As previously stated the Union Pacific system purchases its supply of ties, car material, and so forth, in this territory f. o. b. O.-W. R. & N. rails, which means that a mill located on the Southern Pacific bidding on a Union Pacific order must pay the local rate from the mill to Portland.

1582 Sixth: With respect to commercial movement of lumber from the mills in western Oregon a very large percentage is sold through brokers and the routing is controlled by or through these brokers, whose headquarters are not only located in the lumber (2929) producing district, but in the cities of Portland, Tacoma, Seattle, San Francisco and east.

In many instances the consignee at destination will specify the routing, in which case either the broker, or if purchasing direct, the mill, usually observes the consignee's instructions.

I know one brokerage firm, wholesaler, here in Portland that controls and sells the entire output of two mills on the Southern Pacific Oregon lines.

Under all of these circumstances the railroad not directly serving a lumber mill has but very little to offer, even though the shorter line, to secure anything like a considerable share of the traffic.

Somewhat similar considerations are true with respect to the routing of all other commodities.

The Southern Pacific Railroad is the oldest established line in western Oregon. By reason of this fact most of the warehouses and industries handling carload traffic are located adjacent to and served by Southern Pacific trackage. In many instances these industries occupy ground leased from the railroad company in consideration of which, all things being equal, they would naturally route via the originating line. The local agent is in constant touch with their operations and is charged with the responsibility of securing the traffic.

1583 Shipments are also handled through brokers and outside agents (2930), the same as lumber, who specify routing and whose routing instructions are generally observed.

A very small percentage of the agricultural products, fruit, canned goods, and so forth, is sold by the producer to the consumer. The fruit grower takes his products to the packing house located on railroad tracks and operated either by a dealer or by an association, where the fruit is packed and sold to the best advantage in numerous ways.

Canned goods are generally sold to jobbers who in turn sell to wholesalers, any of whom may have a voice in controlling the routing of the shipments, through the medium of the orders for cars for loading.

Through orders for cars in connection with which routing is specified the agent receives first notice of any adverse routing, and, as stated, is in position to telegraph and endeavor to secure the long haul.

With respect to Mr. Wiggins' Exhibit No. 28, estimating revenue to the cross-State line based upon Mr. Teutsch's estimate of available tonnage as shown in his Exhibit 1 for the western Oregon counties therein named:

I have shown in my previous exhibit that over fifty per cent of the apples received during the years 1926 and 1927 at east Portland

from Southern Pacific-Oregon lines were for switch movement, local movement and movement via other (2931) routes than Union Pacific.

In 1926 the movement via Portland and Huntington to eastern destinations was 22 cars, and in 1927, 11 cars, showing a de-
1584 crease in 1927 as compared with 1926 of fifty per cent. Mr. Teutsch does not state that there are any newly planted acreages, therefore, I do not understand how there would be any created tonnage in five years. As a matter of fact the production of commercial apples in western Oregon has been decreasing for a number of years.

Taking the first item of five cars of apples for illustration, it is proposed by Mr. Wiggins to allow the cross-State line mileage prorate for the haul 189 miles, Crescent Lake to Crane, or a total of $188.70 for the haul of the five cars.

Under the present adjustment through Portland to O.-W. R. & N. would receive for this movement Portland to Huntington $480.00 so that by routing this traffic via cross-State line instead of through Portland the O.-W. R. & N. would receive less than one-half its present revenue.

I might add that this illustration that I give with respect to apples will apply with all the other commodities moving to eastern destinations.

Pears: While Mr. Teutsch referred to increased acreage coming into bearing, it is my understanding that there is no increased acreage of pears in Lane County. My previous exhibit does not show any carloads of pears (2932) received from the Southern Pacific at Portland for the years 1926 or 1927. This would not indicate any increase through the Portland gateway. I might elaborate on that a little bit and state that the pear movement from southern Oregon is through the Roseville gateway. It is a seasonal movement, and the packing houses require that the refrigerator cars be promptly spotted and be on hand for loading when required. The
1585 Southern Pacific supplies those refrigerator cars, bringing them north from California, and looks after the shipper's requirements in every detail, so that it is only natural that the shipper would favor, under those circumstances, the Ogden gateway, even if they didn't have a shorter route.

Comr. McManamy. Those cars are P. F. E. cars, usually, and owned jointly by the Union Pacific and Southern Pacific, are they not?

A. Yes, sir.

Green prunes: Mr. Teutsch referred to young orchards coming into bearing, and that his estimate of increase is based upon fifteen to seventeen per cent increase predicted by the bureau of economics in a recent study, trees to come into bearing in the next five years, which should be four carloads, page 195 of the transcript. (2933.) The prune growers have experienced difficulty in marketing this product for a number of years, it being generally considered that there was an overproduction, and some orchards have been neglected.

The prune crop in the Willamette Valley, north of the Umpqua Valley, this year is very light, to such an extent that there is insufficient quantity to supply the canneries with prunes for canning, with the result that contracts have been made by cannerymen for prunes from Milton-Freewater district in eastern Oregon and in Yakima Valley for shipment to Salem, Hillsboro, Portland, and so forth.

Green prunes from Roseburg, the same comment. I understand that there are not sufficient prunes in the Roseburg district to take care of the cannery requirements from the Willamette Valley.

1586 Fresh cherries move by express, and would be handled through Portland, account fast service.

Albany, Linn County, same comment. Strawberries—he refers to forty cars of strawberries. These strawberries are frozen in barrels or cans and sent to Portland cold storage plants for storage until sold, moving east from Portland direct. There would be no movement of this commodity via the cross-State line. There are no cold-storage plants in Linn (2934) County that would take care of these berries there.

Medford, Jackson County, pears: Entire movement east now via Roseville and Ogden. The distance to Granger via Ogden is 1,315 miles, via Portland 1,262 miles, via proposed cross-State line, 1,119 miles.

It should be remembered that shipments of pears require refrigeration and the icing stations are located with respect to movement via existing routes.

It is extremely doubtful if the shippers would change from an old established and dependable service to a doubtful service via proposed cross-State line.

Seeds: In 1926 the O.-W. R. & N. Company received at Portland ten carloads from Southern Pacific Company points in western Oregon, of which five went east via Marengo and Milwaukee and one via Union Pacific, the balance to local destinations. This commodity can not be considered as tonnage for cross-State line.

Nuts: In 1926 the Oregon-Washington Railroad & Navigation Company received from Southern Pacific at Portland seven carloads of nuts from all of western Oregon, of which five cars went to destinations east of Huntington. In 1927 ten carloads, of which four carloads went to destinations east of Huntington.

1587 Walnuts are also produced in Yamhill and Marion Counties. Therefore, unless there are new orchards coming into bearing (2935), the possibility of any tonnage of this commodity moving via cross-State line is very doubtful.

Broccoli: Mr. Wiggins is taking the average movement for several years to all markets, east and west; that is, 379 cars, and sends it all over the cross-State line to Chicago and New York.

My exhibit previously presented shows that the Oregon-Washington Railroad & Navigation Company handled to points east of Hunt-

ington in 1926, 631 cars; in 1927, 222 cars; and in 1928, 164 cars, indicating a gradual decrease in the movement. Broccoli is a highly perishable commodity requiring perfect refrigeration, and because of the icing facilities now available via the present routes there is not any likelihood of this commodity moving over the proposed cross-State line.

I might say with the completion of the Alturas line and making that a through route, with proper icing facilities that business would in all probability go that way, but I am looking upon the cross-State line as a local line.

There are no icing facilities upon the present Alturas line as it may exist from Klamath Falls.

Exam. ROGERS. In all your comments, Mr. Lounsbury, you are giving no weight to the suggestion of Mr. Newell about the arrangement between the cross-State line and the Southern Pacific, are you? (2936.)

A. Yes; I am having in mind Mr. Newell's statement that he would run a mixed train across that line.

Exam. ROGERS. Well, I was wondering if you also had in mind the obligation imposed in paragraphs 10 and 11 in section 1, where the carriers must furnish adequate train service, regardless of what Mr. Newell suggests.

1588 A. Well, the train service would be adequate, undoubtedly, for the traffic that would be received, but from my knowledge of that territory and my experience in that territory in the last twenty-five years I think Mr. Newell's ideas as to the business that would move over that line are not based on conditions of fact.

Exam. ROGERS. Well, I recognize that, that Mr. Newell's basis is on an arrangement between the Southern Pacific and the Union Pacific, or the O. W., if the O. W. buil[illegible] this line.

A. If the arrangement is no better than the present one via the Portland gateway, why, the cross-State line would be no better treated.

Exam. ROGERS. That is probably true, but if an arrangement should, as Mr. Newell suggests, whereby it would be more profitable to both the Southern Pacific and Union Pacific to route the traffic that way, be carried into effect, do you have any doubt about the train service in order to consummate that program?

A. Why, if that arrangement were carried in effect—that is, if (2937) the line were built and that arrangement carried into effect, why, I would think there would be pretty good train service across that line.

Exam. ROGERS. Yes; but that is what I had in mind—in your comments, you have given no effect to that suggestion of Mr. Newell's?

A. No, sir; I am taking the conditions as they now exist.

Exam. ROGERS. And assuming that this other thing will not be brought about.

A. Yes, sir.

Exam. ROGERS. That Mr. Newell talked about? (2938.)

A. Yes, sir; I am not considering that at all.

1589 Canned goods: Of the 387 cars delivered to the Oregon-Washington Railroad & Navigation Company at east Portland in 1927, 202 were for switch movement. A few may have been for wholesale houses at Portland but the bulk was switched to docks by the Oregon-Washington Railroad & Navigation Company for forwarding by boat, amounting to 53 per cent of the total; 71 cars or 19 per cent moved to points east of Huntington.

There are canning plants located in all of the Willamette Valley counties, the largest operations being at Salem, and this 19 per cent represents the entire movement from western Oregon, via Portland, Oregon-Washington Railroad & Navigation. Furthermore, the Southern Pacific maintains special rates into packing centers on fruits, berries, and vegetables from outlying points which give them the preference in securing the long haul on the outbound movement.

Mr. Wiggins shows a total of 134 cars for the cross-State line, which is almost twice as much as we handled in 1927 from all of western Oregon via the Huntington gateway. It is very questionable, therefore, that any of this traffic can be considered as reliable tonnage for the cross-State line.

Dried fruits: In 1926 we had no movement, and in 1927, 2 cars to points east of Huntington via the Huntington gateway from all of western Oregon. That is, other than prunes.

Mr. Wiggins in Exhibit 28 shows 25 cars and revenue thereon for the (2939) cross-State line, as against two cars from all western Oregon.

Dressed poultry: In 1926 there was no movement via Portland and Oregon-Washington Railroad & Navigation.

In 1927, six cars from all of western Oregon via Portland and Huntington gateways.

1590 Mr. Wiggins in Exhibit 28 shows 10 cars for the cross-State line as created traffic.

Eggs: As previously explained, the egg packing house at Eugene is located on the Oregon Electric, and shipments will continue to move that way. There was no movement through Portland and Huntington gateways in 1926 or 1927 from western Oregon.

Cattle: Eugene to Crane: Mr. Wiggins shows in Exhibit 28, 66 cars. By reference to page 33 of Mr. Wiggins' Exhibit 26 there was one car of livestock moving off the Southern Pacific to Idaho via the Portland gateway, and 1 car westbound. This car evidently moved from Idaho to the Oregon State fair at Salem for exhibition.

On page 194 of transcript, August 3rd, Mr. Teutsch states:

"As the irrigated valleys in eastern Oregon develop, requiring the stocking of dairy cattle, we figure the annual movement of 2,000 head of dairy cattle to eastern Oregon from (2940) these counties via the cross State, giving 66 cars."

The increase in dairy cattle in southern Idaho may take care of the requirements over the period of time that the irrigated sections are in process of development.

Furthermore there are other counties in western Oregon north of Linn, Benton and Lane Counties where dairying is carried on to a greater extent, and any cows required may move from these northern Willamette Valley counties via the Portland gateway due to better facilities for feeding enroute.

Furthermore it is very doubtful if 66 carloads of dairy cattle could be purchased in one district. It is usually the custom of the purchasers to send a representative to various dairy districts to look for cows, and any newly irrigated acreage in southern Idaho or Malheur County may be supplied from western Washington, eastern Idaho, Utah or even Wisconsin, so that it is possible that the cross-State line might not secure any movement of cows from
1591 the lower Willamette Valley counties to southern Idaho.

Sheep: Mr. Wiggins in Exhibit 28 shows 35 cars from Klamath Falls to Chicago and New York. It is not likely that the Southern Pacific and Great Northern would join in through rates with the Union Pacific system lines which would deprive them of any of this traffic, and even if they did it is doubtful if there would be any movement via cross-State line due to fact that the sheep may move to Klamath Falls (2941) by rail for grazing in transit, in which event the movement east would be over the line handling the local movement into the grazing point. Mr. Wiggins shows 309 cars from Bend to Chicago and New York. The same comment with respect to movement from Klamath Falls equally applies to movement from Bend. During the year 1927 the Oregon-Washington Railroad & Navigation Company handled 127 carloads of sheep from Des Chutes branch to eastern markets, of which 21 cars consisted of sheep purchased by the Russian Government moving to New York for export, so that the actual movement to eastern markets for the year 1927 was 46 carloads.

Wool: Mr. Wiggins shows in Exhibit 28, nine cars from Klamath Falls, 40 cars from Bend to Boston. The wool from this territory moves to Portland for shipment to Boston via the canal. There would be no eastbound movement by rail.

Sheep: From Fort Rock, Mr. Wiggins shows 86 cars to eastern points. It is my information that there are not over 5,000 head of sheep in the Fort Rock and Christmas Lake Valleys, and I have therefore estimated movement to the east of 18 cars, or 195 tons, from milepost 230, which is the tributary point on the proposed cross-State line to the Fort Rock and Christmas Lake Valleys. (2942.)

Wool: From Fort Rock to Chicago and Boston, Mr. Wiggins shows 14 cars. Wool moves to Portland as previously explained.

1592 On page 4 of Mr. Wiggins' Exhibit 28 is shown 385 carloads of corn from Omaha to Eugene. During the year 1927 the Oregon-Washington Railroad & Navigation Company delivered to the Southern Pacific at Portland 246 cars of corn for all points on the Southern Pacific lines in western Oregon and yet he shows 385 to the cross-State line.

There would be no difference in the freight rate on corn and other feeds from Iowa, Nebraska, and so forth, to Willamette Valley points if the cross-State line were constructed, and this traffic would undoubtedly move in through westbound trains via the Huntington and Portland gateways.

Furthermore, this grain is subject to milling in transit rates. A great deal of it is milled in Portland by the Portland mills.

Feed: Crane to Eugene, Corvallis, and so forth, Mr. Wiggins shows 723 cars.

I assume by feed is meant millfeed, the product of flour mills, or barley and oats as well as poultry feed.

There are flour mills in western Oregon that now supply the feed requirements of the dairy producers, in some instances within hauling distances from the mill, but in the event there should not be sufficient millfeed produced by the (2943) mills in western Oregon the Portland mills can more than supply the demand.

In addition there is abundant supply of feed to be had from the Columbia River counties in Oregon east of Portland, from which distance and rates are lower than would be via the cross-State line from southern Idaho mills or Harney County, as shown on previous exhibit.

There are cereal mills at Tacoma and Seattle, also, that sell millfeed in western Oregon and are less distant than southern Idaho.

1593 As previously shown during the year 1927 the Oregon-Washington Railroad & Navigation Company delivered to the Southern Pacific at East Portland for all of western Oregon 37 cars of barley and one car of oats. I am unable to show the number of cars of millfeed as our records show flour and feed under the same heading.

Poultry feed principally moves from cereal mills at Portland, Tacoma, and Seattle producing this product in large quantities.

This estimate of 723 cars of feed to move over the cross-State line is absurd to anyone familiar with the situation.

Mr. Wiggins shows hay from Crane to Eugene and other points 702 cars.

I have prepared a statement showing the rates on hay to Willamette Valley points from Hermiston, Stanfield, Echo, Klamath Falls, Ontario, Oregon via Crescent Lake—from the (2944) latter point is shown two sets of rates, which I wish to present as an exhibit.

(Said statement was thereupon received in evidence, marked "defendants' Exhibit No. 62, Witness Lounsbury.")

It will be noticed that in connection with the hay rates via Crescent Lake I have also shown the continuous mileage rate for joint haul applying intra-State, as well as the combination on Crescent Lake.

Page 2 of this statement shows the old and new rates from eastern Oregon and from Yakima, Washington to Willamette Valley points prior to the establishment of the continuous intrastate mileage rates.

Page 3 shows rates that may be applied via Crescent Lake if proposed cross-State line is constructed, in one case using combination on Crescent Lake, the other continuous mileage for joint line haul.

1594 In this connection would state that since the construction of the Great Northern from Bend to Klamath Falls the joint line mileage basis used in this statement has not been adopted for joint hauls between the Southern Pacific and Great Northern.

This statement shows that rates are lower from eastern Oregon points, namely Boardman, Umatilla, and Hermiston, the alfalfa-hay-producing district, to Eugene than would obtain (2945) from Ontario to Eugene if either the joint continuous mileage or combination rates were adopted.

During the year 1927 the Oregon-Washington Railroad & Navigation Company delivered to the Southern Pacific at East Portland for all western Oregon points 260 carloads of hay, approximating 3,790 tons, on basis of 14½ tons to the car, which is the average loading.

Mr. R. C. Crockett, professor of economics, University of Oregon, in previous hearing March 29, 1924, page 529 of transcript, testified in reply to inquiry:

"How much of this great quantity of hay that is needed in the Willamette Valley, alfalfa hay, will come by way of the new line?

Answer. "I have put the figure at 450,000 tons for the first five years."

Question. "Do you know what the output of the Klamath country is in that kind of product?"

Answer. "I have estimated that perhaps about 25 per cent of that might come from the Klamath country."

Twenty-five per cent of 450,000 tons would be over 150,000 tons.

Mr. Mulchay has made a check of movement from Klamath County to all points in western Oregon for the period September 1st, 1926, to May 31st, 1928, which shows a total of 27 cars

1595 (2946) from Klamath County to western Oregon.

The average carload of hay is 14½ tons, which would make total tonnage of hay from Klamath County during a period of 20 months, 391 tons.

It appears from testimony presented during this hearing that the alfalfa hay grown in Klamath County is utilized for feeding livestock, and it is therefore equally fair to assume at this time that alfalfa hay produced in Harney County will also be utilized for feeding livestock—range cattle, not dairy cattle. They have severe winters over there, and the alfalfa hay that they raise in the Harney Valley is used for hay for stock that is ranged.

Exam. ROGERS. What do you have in mind in western Oregon?

A. What I had in mind here to show, that at the previous hearing the estimate that over a hundred thousand tons of alfalfa hay would move from Klamath County to western Oregon, when the

Natron cut-off was completed, and in 20 months since that line has been constructed there have been 27 cars of alfalfa hay moved from Klamath County, which is a better alfalfa hay-producing district than Harney County, and in (2947) this hearing the testimony was to the effect that the supply was limited because they were using it in Klamath County to feed all kinds of stock. Now, the same assumption is absolutely correct with respect to Harney County.

Mr. ELLIS. In fairness to Mr. Crockett, who is now dead, I think we should have the record clear on all of these lines, and not merely on the Natron cut-off, and it was on ultimate consumption, and not upon the completion of the construction, and not on the consumption under existing conditions.

Apples: Crane to San Francisco and Los Angeles, 138 cars—still dealing with the estimate of revenue and earnings via the cross-State line.

1596 I have previously covered this proposed movement in analyzing Mr. Teutsch's Exhibit No. 1, to which I would add that the rate on apples from Medford to San Francisco is 49½ cents, from Hood River 35½ cents rail and water, and from Yakima 60 cents rail and water, as against 98 cents from southern Idaho to San Francisco via Wells or Ogden, at the present time.

The movement of apples from southern Idaho to Los Angeles will continue to move via the Union Pacific through Salt Lake (2948), which is the shorter distance.

Potatoes: Crane to San Francisco and Los Angeles, 174 cars. Explanation of this movement is covered in my remarks analyzing Mr. Teutsch's Exhibit No. 1, to which I would add that there was shipped from the Yakima Valley through Seattle and boat to San Francisco and Los Angeles, principally San Francisco, during period July, 1927, to March, 1928, inclusive, approximately 1,200 carloads.

Potatoes, Crane to Roseburg—35 carloads.

Under heading "Douglas County" in his Exhibit No. 1 Mr. Teutsch shows 35 cars of potatoes available for movement over proposed cross-State railroad.

United States Department of Agriculture, Division of Crops estimates, under heading "Oregon crop production, 1926" shows 3,095,375 bushels of potatoes in western Oregon, and 1,578,075 bushels produced in eastern Oregon counties. It is, therefore, difficult to conceive of movement of 35 cars from southern Idaho to Roseburg.

Horses and mules: Crane to San Francisco, Los Angeles, Portland, and Seattle, 75 carloads divided between Crescent Lake and cross-State junctions.

1597 There is a regular movement of range horses from eastern Oregon points under special rates to the horse-meat packing (2949) plant and fertilizer plant located at Kenton, Oregon, a suburb of Portland. Some of the range horses from southern Idaho are moving to similar plant located at Butte, Mont.

At present time there is a representative of the Russian Government in this territory who has already contracted for 1,750 head.

Under these circumstances the regular movement of range horses from eastern Oregon and southern Idaho will continue to Portland via the Huntington gateway on account of the shorter distance.

Since the Oregon-Washington Railroad & Navigation have no through joint rates with the Oregon Electric on any movements that are competitive with the Oregon Electric or Hill lines, the Great Northern and Northern Pacific, it is not likely that through joint rates would be established via cross-State junction.

Cattle: Crane to San Francisco, Los Angeles, Portland, and Seattle, 988 cars divided equally to the four points named.

The movement of cattle from southern Idaho and Malheur County is covered in my analysis of Mr. Teutsch's exhibit. I have, however, conservatively estimated from milepost 133 near Crane possible movement of 3,350 tons, approximating (2950) 258 cars of cattle to Portland via Crescent Lake, and 3,375 tons, approximating 260 cars, to San Francisco via Crescent Lake, making total of 517 cars that might be expected to move over the proposed cross-State line from the Crane-Burns district.

Page 5, Mr. Wiggins' Exhibit 28:

Cattle: Fort Rock to San Francisco, Los Angeles, Portland, and Seattle via cross-State junction and Crescent Lake,
1598 equally divided as to markets, 84 cars.

My information is that there are not to exceed 3,000 head of cattle in the Fort Rock and Christmas Lake Valleys, therefore, I have estimated movement of 650 tons, approximating 50 cars, from Fort Rock to Portland via Crescent Lake.

Sheep and hogs: Crane to San Francisco, Los Angeles, Portland, and Seattle, 352 cars, equally divided as to markets.

Sheep from the territory in question move east.

As previously explained in my analysis of W. L. Teutsch's Exhibit No. 1, in 1926 there were 2 carloads of sheep shipped from off the Brogan and Oregon Eastern branches to southern California and no hogs shipped to California from off of these branches.

There were 179 cars of sheep to Oregon and Washington markets and 10 cars of hogs. Account of shorter distance to Oregon and Washington markets this business will undoubtedly continue (2951) to move via the Huntington gateway.

Butter: Crane to San Francisco—64 cars.

The movement of this commodity from southern Idaho to California was explained in my analysis of Mr. Teutsch's Exhibit No. 1.

It should be borne in mind that the distance via Salt Lake to Los Angeles is shorter than via the proposed cross-State line.

Poultry: Crane to San Francisco and Los Angeles—2 cars. The same explanation as to butter applies as to poultry.

Hogs: Crane to San Francisco, Los Angeles, Portland, and Seattle—53 cars, equally divided as to markets. Previous explanation has been made concerning this movement. (2952.)

1599 The same can be said as to calves and hogs, Crane to San Francisco, Los Angeles, Portland, and Seattle—four cars.

Pages 6 to 16, Mr. Wiggins' Exhibit No. 28:

In view of the foregoing analysis showing the actual movements, the estimated tonnage and revenue based on created traffic for the first, third, fourth, and fifth years is in my opinion unsound, unreasonable, and cannot be relied upon to sustain or justify construction of cross-State line as against existing movements through the Portland gateway, as far as western Oregon is concerned, and the Wells and Salt Lake gateways as far as southern Idaho is concerned.

In my estimate of the revenue and earnings for the cross-State line I have depended upon local traffic moving on and off the line between Crane and Burns. I did not undertake to assign to the cross-State line any traffic now moving over the present lines which would if diverted to the cross-State line take the revenue from the present line to sustain the cross-State line, and in many cases take more revenue from the existing lines than the cross-State line would receive.

In his Exhibit No. 8, Mr. Samuel L. Newton presents a statement showing carloads received at Nyssa, Ontario, Crane, and Burns from California points that might be routed via proposed route across Oregon.

On page 1 the only commodity moving from California to Nyssa is a car of automobiles from Melrose. (2953.) I am dealing now with Mr. Newton's Exhibit No. 8—automobiles take first class rate, and the combination on Portland is $2.43½ per one hundred pounds as against combination on Crescent Lake via cross-State line of $3.14 per one hundred pounds; therefore, this business would continue to move via Portland.

1600 On page two of said exhibit showing carloads received at Burns are three cars automobiles from Melrose, Calif., two cars sugar moving from San Francisco via steamer to Portland, thence rail. With respect to the automobiles from Melrose to Burns the present first class rate via Portland is $3.46½ per one hundred pounds, as against combination on Crescent Lake using the Oregon distance scale of $2.86 per one hundred pounds.

The class rates from Portland to southern Idaho and Burns Branch are being reduced effective October 1, 1928, as result of Interstate Commerce Commission docket 19459, State of Idaho ex rel Public Utilities Commission of Idaho vs. Oregon Short Line et al., decided July 5, 1928, prescribing continuous distance rates from Portland to branch line points in Idaho. The Oregon Short Line and Oregon-Washington Railroad & Navigation Company voluntarily readjusted the rates from Portland to points on the Oregon Eastern branches effective same date so that effective October 1, 1928, the rate on automobiles via Portland from (2954) Melrose to Burns will be $3.09 per one hundred pounds, as against $3.46½ at present.

The water and rail rates on sugar from San Francisco to Burns through Portland is $1.65, as compared with all-rail combination on Crescent Lake $1.27.

Effective October 1, 1928, the water and rail combination through Portland will be $1.33.

The present rate on sugar is at present based on fifth class rate beyond Portland. This situation however would not obtain at points east of Riverside.

1601 It is also reasonable to assume that were the cross-State line constructed the rates through Crescent Lake would be no lower than rates at least by water and rail through the Portland gateway.

On page 3 is shown one car of roofing from Paraffine, Calif., to Burns on which the combination through Portland figures $1.01 per one hundred pounds as against $1.28½ combination on Crescent Lake.

Two cars of sugar already explained.

Four cars of automobiles from Melrose and one car of baker's ovens from Emeryville, Calif., on which the rate via Portland is $1.41 per one hundred pounds, and the Crescent Lake combination would make $1.45½.

Pages 4, 5, 6, 7, and 8 show carloads received at (2955) Robinette, Vale, and Ontario, to which points of destination rates from California points of origin are lower through Portland than would be via Crescent Lake and the cross-State line.

The last page shows receipts at Crane, namely four cars of automobiles from Melrose, from which present rate via Portland is $3.26½ and combination on Crescent Lake would make $2.77½.

Effective October 1st the rate from San Francisco to Crane via Portland will be $2.89.

From this it will be seen that the only commodity affected would be automobiles moving from Melrose to Crane and Burns under first-class rates.

I have prepared a statement showing the class rates in cents per one hundred pounds at present in effect from Portland and San Francisco to Ontario, Crane, and Burns, and what the rates will be October 1st, 1928, comparing same with combination via Crescent Lake.

1602 (Said statement was thereupon received in evidence, marked "defendants' Exhibit No. 63, Witness Lounsbury.") (2956.)

This statement shows that from Portland to Ontario the class rates are lower than would be in effect via cross-State line. From Portland to Crane the rate of $2.17 first class effective October 1st will be slightly higher than Crescent Lake combination of $2.05½ Portland to Crane, and relatively the same situation as to class rates Portland to Burns.

From San Francisco to Ontario present class rates via Portland water and rail and all rail will be lower than via Crescent Lake.

From San Francisco to Crane water and rail rates effective October 1, 1928, $2.66½ first class will be lower than the first-class rate through Crescent Lake of $2.77½, and from San Francisco to Burns the water and rail rate via Portland of $2.88½ effective October 1, 1928, will be lower than rate via Crescent Lake, $2.97½.

In order that the commission may have some understanding of the rate adjustment between San Francisco and northwest points, I desire to submit the following:

Long established steamer lines are operating between (2957) California ports on the one hand and Oregon and Washington ports on the other hand, applying very low class and commodity rates. The Southern Pacific has relief from the fourth section by reason of water competition to apply lower rates, class and commodity, between San Francisco and Portland than apply at directly intermediate points. Therefore, generally speaking, the rates between San Francisco and Crescent Lake would uniformly be higher than rates between San Francisco and Portland.

As result of this situation, rates between San Francisco and Oregon, Washington, Idaho, and Montana are usually made by
1603 using steamer class and commodity arbitraries from San Francisco to Portland or Puget Sound, plus the rail rates from Portland and Puget Sound ports to the interior.

The all-rail rates are also made in like manner by using proportional rates to Portland, plus the all-rail rate from Portland to Oregon, Washington, and northern Idaho points, and in some instances through rates are made without regard to the Portland combination so long as such rates do not violate the fourth section.

For this reason Portland is now the basing point through which and on which class and commodity rates are made between San Francisco and the Northwest territory.

For example, on canned goods the steamer arbitrary from San Francisco to Portland used in making through rate to (2958) Ontario, Oregon is 17½ cents, plus the canned goods commodity rate from Portland to Ontario of 49 cents, making through rate 66½ cents.

As against the steamer arbitrary of 17½ cents San Francisco to Portland the Southern Pacific applies 22 cents on canned goods to apply in connection with tariff applicable to destinations east of Portland in Oregon, Washington, and northern Idaho, but this arbitrary does not apply to points east of Huntington, so that the through rate by rail on canned goods from San Francisco to Ontario would be the local rate of the Southern Pacific to Portland, 28½ cents, plus 49 cents, or 77½ cents. The rate on canned goods from San Francisco to Crescent Lake is 71 cents. From San Francisco to Portland it is 28½. (2959.)

I think it was Mr. Magladry who testified that the average time on lumber from Eugene to Chicago via the Southern Pacific,
1604 through the Roseville gateway, is sixteen days, the minimum fourteen or maximum eighteen. I have taken a memorandum of 10 cars moving from Longview, Wash., 10 cars from Portland and 10 cars from off the Southern Pacific, 5 originating at Eugene moving via Portland, and the average from Longview and from Portland to Council Bluffs is seven days and four hours, and to Chicago nine days.

Exam. ROGERS. Do you think that 16 days or 14 days is the representative time via the Roseville route?

A. No; I think the time is a little better than that. I think that Mr. Magladry's figures are too extravagant on the time. I think the Southern Pacific is doing better than that.

Exam. ROGERS. I had in mind that the perishable movement was nine or ten days. According to the impression I get here they had better put some of the perishable on the lumber trains; it would get there quicker.

A. Well, some testimony has been submitted here to the effect that by reason of the fast time on lumber to the East the lumber yards in the East were not now carrying stocks, as a result of which the lumber yards here must carry larger (2960) stocks and the eastern consumer orders direct from the lumber yard here. It was the shortening of time by the western carriers that brought about that condition.

I have a record here of five cars from Eugene that moved through Portland destined to Chicago, during the period from May 16th to July 17th, this year. The minimum time to Chicago was ten days from Eugene via Portland gateway, and the maximum was thirteen days, and there was just the one car made the thirteen days. The other four made ten and eleven days.

1605 Comr. MCMANAMY. Are those all the cars that moved during that period?

A. To Chicago. I told our manifest clerk to take the last five cars from Eugene, and this is what he gave me. We carry a manifest record.

Exam. ROGERS. What is the running time on perishables from Eugene to Chicago?

A. Our perishable schedule from Portland to Council Bluffs is 145 hours, or six days and one hour; to Chicago 175 hours, or seven days and seven hours. From Eugene to Portland the schedule could be accomplished easily in one day. That would cover the interchange here. (2961.) That would be eight days and seven hours on perishables to Chicago as against ten days on lumber; but our regular schedule on all merchandise freight other than fruit blocks from Portland to Council Bluffs is seven days and ten hours, and to Chicago eight days seventeen and a half hours.

Exam. ROGERS. And do you put lumber through the Portland terminal and the other terminals as quickly as you do perishables?

A. Just about. All perishable freight coming off the Southern Pacific here has to be re-iced. It does not take long, because they have facilities at east Portland for icing.

Exam. ROGERS. It is a matter of but a few minutes, isn't it?

A. Yes; but it requires some switching, and the lumber is just switched (2962) from one yard to another, and our train goes out of here at night.

1606 Comr. MCMANAMY. What do you mean by fruit blocks out of Portland?

A. We make up a fruit block at Rieth, but our fast manifest train carries the fruit to Rieth, where the block is made up every day. It is made up just three miles this side of Pendleton, Oreg., and there the fruit block carries all fruit originating in western Oregon and west of Pendleton, and in Washington, including the Yakima Valley, north of Wallula.

Comr. McMANAMY. Together with sufficient other commodities to make up your manifest tonnage?

A. Yes, sir. But the fruit block runs every day, even if there is only one car. Those fruit trains run whether we have other tonnage or not.

Exam. ROGERS. Have you any idea as to the number of trains that do have full engine tonnage; that is, fruit trains?

A. That depends upon the season. If it is in the fruit moving season the trains have the tonnage; that is, in the peak movement. (2963.) They have the tonnage in the fruit moving season.

Comr. McMANAMY. And if it is not in the fruit moving season they have something else?

A. It is all perishable. It does not have to be fruit. There are other perishables moving in refrigerator cars right along.

Comr. McMANAMY. And if they don't have the tonnage of perishables they have the tonnage of other freight?

A. Yes, sir. But they do run that train every day, just the same, and I don't think there is any time but what there are some
1607 perishable cars on that train. We put other freight on those perishable trains to make up the tonnage. That train wouldn't run with just one car. The train does not run light if there is tonnage available to go. And it is the business of our operating officers to see there is tonnage available to go on that train rather than to send it out light. We have put lumber on that train, where we have had a request (2964) to expedite a car.

Now I have taken an average of ten cars, moving two from Silverton (in Marion County), seven from Eugene, and one from Albany, via Portland to Chicago and the average time was ten days and ten hours. That was lumber. From this explanation you will see that the short time transportation of lumber spoken of is a fact from here east.

The WITNESS. I understand you to mean that the railroads were handling lumber from the Pacific coast to the East in reasonably short time?

Exam. ROGERS. And what I had in mind was your statement that the carrying of less lumber on hand by the eastern dealers was due to this expedited service.

A. Yes, sir; that has brought it about, as against the fact that lumber used to run all over the line, but——

Exam. ROGERS. Yes; I was going back to the statement of Mr. Magladry and some of the other witnesses who said that the time in

transit was an element, because the dealers were carrying short stocks.

A. But that is only in exceptional cases. I have here a letter written by our Chicago representative to me, dated Chicago, June 15th, referring to a movement of ten cars of lumber from Veneta, Oreg., on the Southern Pacific-Oregon lines, from which I will quote as follows:

1608 "Your letter, file blank of the 10th, relative to an order for 10 cars of lumber placed by Blank Lumber Company, Chicago, with Blank Lumber Company, Veneta, Oreg., on which S. P., D. & R. G., U. P., C. & N. W. routing had been requested account slow time in transit desired on these cars." (2966.) We had taken up by this letter, to which he refers, the matter of securing the entire haul from Ogden east on these ten cars of lumber, but the consignee had routed them via the D. & R. G. and the reason our representative gave was because he wanted slow time on these cars.

Exam. ROGERS. Where would the slow-up come about?

A. Well, if the lumber was put on the Union Pacific at Ogden and moved right straight through on a through train, it would probably make better time than if it was interchanged with the Denver & Rio Grande and went through Denver and was then delivered back to the Union Pacific at Denver.

Mr. ELLIS. Does that letter indicate why they wanted slow time on those particular cars?

A. No; but from my own experience I can tell you that that is only one of a number of cases where the lumber moving may be handled by a broker who has not sold the lumber, who is just handling it for the mill, and he contracts it out unsold and he will send it over a circuitous line to sell it while it is in transit and——

The date of that letter is June 15, 1928. We have had a number of complaints from our soliciting representatives, not only in the Willamette Valley but Grays Harbor and Puget Sound, that they would not route the business via the Union Pacific because it would get (2967) by the diverting point before they could catch it.

1609 That is, the lumber that is moving unsold and on consignment and to be diverted in transit; and that amounts to something.

Exam. ROGERS. You don't have that trouble with the Southern Pacific?

A. I would rather not answer that.

Now in that connection, since I have given you the schedules on the lumber, some mention has been made of the movement of the cauliflower—of the celery from the Lake Labish Celery Union at Brooks, Oreg., to the east and I have here a memorandum of the distribution of this celery from Brooks for the year 1927. There was a total of 411 cars, of which 125 moved via Portland and the Union Pacific, 132 moved via Portland, the S. P. & S.—that is the Spokane, Portland & Seattle, and either the Northern Pacific or the Great Northern; 57 moved via Ogden, S. P. and U. P.; 21 by El

Paso; 65 to California, local; 10 to Oregon, local; 5 to Spokane, Portland & Seattle destinations, local.

In connection with that celery movement from Brooks—I have been in pretty close personal touch with that—at the beginning of the season the celery started moving via Portland and the Union Pacific. It was sold through an eastern commission house or an eastern wholesaler. The first movement (2968) from the warehouse started via Portland and Union Pacific, and then it stopped, and I called on the manager of the association and asked him why it was he had stopped shipping by the Union Pacific, and he was then loading cars at the warehouse, and he said, "Why, your time is too fast." I said, "What do you mean by that?" He said, "I mean that the first cars that were shipped were sold and we were anxious
1610 and in a hurry to get them to destination." He said, "The cars we are shipping now are not sold and we want all the time in transit we can get to sell them. So I am routing these via Ogden and via the Northern Pacific and Great Northern." I said, "Aren't you giving us any?" He said, "No, because your time is too fast." I said, "What time are you getting by the other lines?" He said, "I am getting six days to Missouri River by the Union Pacific, and eight and nine days via the other routes." I said, "Well, I will take your celery off of the fruit block, if that is what you want." "Well," he said, "if you will slow it up a couple of days, I will give you some of it." And as a result of that he started in routing again through the Portland gateway and we took off the fruit blocks 33 cars of that celery, and put them on the regular manifest train.

I thought it might be advisable and of interest to the commission to make some (2869) mention of the routing of lumber, or the application of rates and routes on lumber from western Oregon through the Portland gateway. Lumber rates apply from all points on Southern Pacific on the old main line, Leona and north, and from the new main line, Klamath Falls and north via Portland and Northern Pacific Railway, except from points on the Klamath Falls line rates apply only in connection with the S. P. & S. and Northern Pacific to all territory to which the Northern Pacific carry rates from Portland. That means you can route a car of lumber to-day from Eugene to the connection with the Northern Pacific or Great Northern direct to Portland, they could take it by their long lines through Tacoma and Seattle—through Tacoma with the
1611 Northern Pacific, or Seattle in connection with the Great Northern, if they wanted to handle that business direct, or it can be taken by the S. P. & S. to Spokane and then turned over to the Northern Pacific or Great Northern. You understand, these rates when put in with the Northern lines were put in either direct through the Portland gateway or in connection with the S. P. & S. to Spokane.

Lumber rates apply from all territory, Leona and north, on the old main line, and Oakridge and north, on the Klamath Falls line

via Portland and Great Northern Railway to Minnesota Transfer and east thereof, also via Billings to points on the C. B. & Q. Railroad. (2971.)

Rates also apply from the above described territory via Portland, Spokane, Portland & Seattle Railway, Spokane, thence on the Northern Pacific or Great Northern Railway.

Via Union Pacific system lines: Rates apply from all Southern Pacific-Oregon lines via Portland and Union Pacific system to Missouri River points, Chicago and east.

There are no rates via Portland, O.-W. R. & N., Spokane and Great Northern to any destination. Rates apply from Southern Pacific points, Leona and north, and Oakridge and north, via Portland, O.-W. R. & N., Spokane, and S. I. Railway to Minnesota Transfer, Duluth and Chicago, but no rates are carried to points east of Chicago via this route.

Rates from points Leona and north, and Oakridge and north, apply via Portland, O.-W. R. & N., Marengo and C. M. & St. Paul Railway to St. Paul, Minnesota Transfer and points north of the Omaha-Chicago line. No rates are carried to points east of Chicago via this route.

Now, in connection with the routing of lumber, before the 1612 Northern lines acquired the Astoria & Columbia River Railroad operating between Portland and Astoria, which is now a part of the S. P. & S. through rates on lumber applied from Astoria and intermediate points to Portland and the lower Columbia mills via Portland and the Union Pacific to all eastern (2971) destinations—via Portland, O.-W. R. & N., Short Line and Union Pacific, to all eastern destinations.

As a result of a complaint and hearing before the Interstate Commerce Commission the S. P. & S., after taking over the Astoria & Columbia River Railroad, succeeded, by order of the commission, in canceling the rates via Portland and the Union Pacific to the eastern destinations from Astoria and all points beyond Portland on the S. P. & S. Railroad, on the ground that the parent lines are entitled to the long haul; and you can figure out many distances through the Portland gateway that would shorten the route more than is under consideration in this case.

Comr. McMANAMY. Then the substance of what you are testifying to is that on request of the shippers the carriers will not only slow up movements and allow the use of their refrigerator cars for storage but will also haul them around the country while they are furnishing that free storage, and that they will do the same on lumber; is that right or wrong?

A. Now, I would not put it just that way, Mr. Commissioner.

Comr. McMANAMY. Well, you didn't put it just that way, but that is my understanding of it. I want to know if it is right.

A. The shipper can avail himself of either the fast or the slow time, whichever he requires.

Comr. McManamy. Well, if he avails himself of the fast time (2972) demurrage begins to accrue about two days earlier
1613 than if he avails himself of the slow time on shipments that are not sold when the car reaches its destination?

A. That is true, and that is one of the considerations. Besides, by the slower route he has the time to sell and divert in transit, and he does not have to rush so much, or sacrifice the sale, if it is necessary, in order to dispose of it before arrival at destination.

Comr. McManamy. And that practice is followed with respect to lumber shipments, celery shipments, and fruit shipments?

A. Yes, sir.

Exam. Rogers. If you have a car of perishables at a diversion point that is held there for reconsignment, the shipper, under the perishable protective tariff, would pay for the ice applied there, wouldn't he?

A. Yes.

Exam. Rogers. Whereas, if he strings the car along en route and it is a couple of days longer coming from origin to the diverting point, the carrier takes care of the ice, of course.

A. Yes; under the through charge. (2973.)

Comr. McManamy. That also applies to the per diem on the car?

A. Well, the carrier takes care of that, too.

Comr. McManamy. Of course, on refrigerator cars it is mileage, but on the ordinary freight it is per diem?

A. Yes, sir. I have just one more comment. The governor yesterday spoke about the hop movement east from the Willamette Valley. Considerable of that movement is by the canal. In 1926 the Southern Pacific-Oregon lines did not deliver to us any hops for eastern movement. In 1927 the Southern Pacific-Oregon lines delivered us three cars destined to points east of the Missouri River.

1614 Exam. Rogers. Well, I gather from your statement, Mr. Lounsbury, that there is a difference of from two to three days on perishable freight from western Oregon as to whether it comes via Portland or goes by the Southern Pacific to eastern destinations?

A. Now, as I understand that, Mr. Examiner, the time from Portland to Chicago is comparable with the time from Roseville, Calif., to Chicago. From the Rogue River Valley I imagine that perishable fruit would reach Roseville as quick as it would reach Portland, but when you get nearer Portland coming north it makes a little difference.

Exam. Rogers. Well, where would this shipment originate that you put on the manifest? Celery, wasn't it? (2974.)

A. Just north of Salem, in Marion County, at Brooks, Oreg.

Mr. Dey. Forty odd miles.

Exam. Rogers. Well then, from that point, we will say Salem! There would be that two or three days difference?

A. There would be a saving in time by handling it from Portland as against going south. If that is not right I would like to have Mr. Mulchay correct it.

Cross-examination:

At the beginning of my testimony, I outlined some of the early history in connection with the movement of western Oregon traffic and stated that when the Southern Pacific and O.-W. R. & N. were under common control, all of the western Oregon traffic moved via (2975) Portland and the O.-W. R. & N. and Union Pacific system lines, principally because of the merger and the fact that those lines were then under one general direction. After the lines were unmerged, the rates and routing were reestablished through
1615 Roseville and Ogden; and in addition to that the rates were established through the Portland gateway with the other lines.

As to whether the predominating routing via Roseville prevailed as distinguished from routing it all through Portland: it changed. The change was more or less gradual until the present condition obtained.

Q. Well, is it not true that during the time when the railroads were under control of the railroad administration, for reasons of economy and efficient operation of the carriers, all of the traffic north of the California line from points on the Southern Pacific was again routed via the Portland gateway (2976) and the Union Pacific system east?

A. Well, I am not competent to answer that from the standpoint of efficiency and economy.

Q. Well, what is the fact as to whether they did that actually during the railroad administration operation of the railroads?

A. During the railroad administration there was more of that traffic moved through the Portland gateway than there has since. I can't say whether it all moved from Southern Pacific points in western Oregon through the Portland gateway, but I know that the movement was heavy. I was in the railroad service at that time and was stationed at Portland as general freight agent of the O.-W. R. & N.

Q. And you don't know what the routing on western Oregon traffic was during the railroad administration period?

A. The shipper controlled the routing on commercial business just the same then as he does now. (2977.)

Q. Do you know what the instructions of the railroad administration were with reference to the routing of unrouted
1616 traffic from western Oregon points on the Southern Pacific?

A. Well, I don't recall that particular feature. I don't believe there was much unrouted traffic. If it was Government traffic it was routed by some officer of the Government during the railroad administration.

Mr. SPENCER. You mean general traffic. The railroad traffic was routed just the same during the railroad administration as at any other time, wasn't it?

A. Yes; that is what I mean. And I mean as to Government traffic, that was not unrouted.

Mr. SPENCER. He didn't ask for Government traffic.

Q. (By Mr. ELLIS.) Then are you saying here that there was no substantial difference in the manner in which the western Oregon traffic originating on Southern Pacific lines moved during the period of Federal control as distinguished from the way it is actually routed or moved to-day?

A. Well, with this exception. I said that during Federal control the movement was much heavier through the Portland gateway, and that had reference to Government business. I think that it is true with any traffic that could be handled through the Portland gateway, that the administration could control that way, was so handled, because of the tremendous movement of traffic to and from California (2978) over the Union Pacific.

There was absolutely no incentive for solicitation and action on the part of local agents in securing routing over the Southern Pacific as distinguished from the situation since during railroad administration. It was all one big railroad.

Exam. ROGERS. Now if that were true, these various elements that you told us about this morning that influence the routing over the Southern Pacific because a mill was located on the Southern Pacific, or the industry, were not there during Federal control, were they?

1617 A. No; they were not there. It was pretty much all left to shippers, because the railroads were not soliciting business and they were handling it to the best advantage of the carriers for the Government.

Exam. ROGERS. What do you suppose the shipper did about the routing in the absence of those elements?

A. Well, as I said, there was a heavier movement through the Portland gateway during that period. I think the lack of solicitation had something to do with that routing. (2979.)

Comr. MCMANAMY. Now have you heard anything about traffic being arbitrarily routed by the railroad administration during Federal control and claims having been made against the Government since that time by the roads from which the traffic was diverted?

A. No; I have not. But of course there is a law now, that if you take freight away from a line over which it is routed the line over which the traffic is routed can make a claim for the revenue. It has been in force for some time.

Comr. MCMANAMY. You don't recall having seen any orders issued by the railroad administration during Federal control to route traffic by a certain more direct and economical line of movement? The order was issued some time ago.

A. Not at this time. If such orders were issued I might have seen them but I don't recall them now.

PORTLAND, OREGON, *20, 1928.*

H. E. LOUNSBURY thereupon resumed the witness stand, and testified further as follows:

Cross-examination—(Contd.)

1618 [The question arose as to the provisions contained in the contract with the Oregon Trunk on the Des Chutes line with reference to extensions of the Des Chutes line beyond Bend and its use by the Oregon-Washington Railroad & Navigation Company. Mr. Ellis asked that a copy of the contract be inserted in the record.] (2981.)

Q. (By Mr. ELLIS.) How did you account for the fact, Mr. Lounsbury, that the traffic moving from western Oregon points through the Portland gateway consists mainly of fruit and other perishable traffic?

A. Well, I didn't say that the traffic moving through the Portland gateway consisted mainly of fruit and other perishable traffic, because the bulk of the movement is lumber, but that which does move that way is routed by the shipper.

I haven't set out any figures in my exhibits showing the amount of that traffic which we receive and the portion of it which is lumber, as distinguished from perishable traffic, but I think the statement I submited would show the comparison. As to what extent our company is active in soliciting traffic from western Oregon, we have two travelling freight agents in western Oregon, one covering the territory north of Eugene, one located at Eugene covering the territory south of Eugene to and including Ashland. We are at this time, and have for the past several years, pursued a policy of active solicitation of traffic in western Oregon. (2982.) In my judgment, we are getting from Southern Pacific points in western Oregon all of the traffic that we can expect to get through active solicitation.

Q. Would you say definitely, Mr. Lounsbury, that the existing basis of divisions between the Union Pacific and the Southern Pacific has not to some extent lessened your desire for that western Oregon traffic to be routed through the Portland gateway?

1619 A. They have not.

Q. Well, is it not true, Mr. Lounsbury, that your divisions through the Portland gateway in connection with Southern Pacific traffic are somewhat unsatisfactory to your company?

A. I can't say that they are. (2983.)

Q. Do your solicitors in western Oregon have any instructions as to the routing to be solicited or advocated in connection with this western Oregon traffic? Are they instructed to get it for routing through the Portland gateway if they can, or just simply to get it routed Union Pacific, either Portland or Ogden?

A. They are soliciting for routing via both the gateways. They are working in cooperation with the agents of the Southern Pacific to the best advantage of either line.

Generally speaking, it is true that the rates on lumber from western Oregon apply with equal advantage through both the Portland and Ogden gateways to all eastern destinations.

Q. What are the principal exceptions, where the Portland gateway carries some arbitrary or additional charge?

A. As far as routing through the Portland gateway and the Union Pacific system lines to eastern points, there is no difference as against routing through the Ogden gateway to all eastern destinations. To Minnesota territory routing is applicable through Ogden and through the Portland gateway Union Pacific to some territory in Minnesota on Northern lines more advantageously than to (2984) other Minnesota territory.

Q. I have heard it said by lumber shippers that they were unable to route via the Portland gateway, I believe, to what they call Minnesota transfer points, by reason of some arbitrary. I am wondering if that is a fact?

1620 A. Now you are speaking about routing in connection with the Union Pacific in that connection, not Northern lines, because there is no arbitrary through Portland gateway and the Northern lines.

Q. But there is via the Portland gateway and the Union Pacific?

Exam. ROGERS. Can you go via Union Pacific, or O. W., and get to Minnesota transfer?

A. Yes; we have rates to Minnesota transfer through Council Bluffs and the Chicago, St. Paul, Minneapolis & Omaha, but I think that what Mr. Ellis refers to is lumber that is being shipped to Minnesota for milling in transit. The door factories in Minnesota and Wisconsin buy considerable lumber in this territory to mill in transit and ship on east, and they can take the lumber from this territory by the northern routes and stop it in transit to be milled at a cent and a half transit charge. To take that lumber through the Council Bluffs gateway and up to Minnesota for milling the transit charge is four and one-half cents. (2985.)

Q. (By Mr. ELLIS.) I believe you testified that there were no Oregon coast mills shipping by water to a rail terminal and thence by rail across the continent. Do you know whether during the past few years there have been mills cooperating on the Oregon coast?

A. The question was with respect to movement through California coast ports. As I said, there were no through rates from Oregon coast mills through the California ports and then east. During the time that the mill was operating at Brookings, I don't recall that there were any arbitraries north of Eureka. I don't know that it is true that the Brookings mill shipped by water to San Francisco and thence by rail east to quite a large extent.

1621 Q. Now, with reference to the matter of the Portland gateway and the traffic handled, you have made some point of

the fact that you are handling less business through the Portland gateway than you did previously, and you quoted a comparison of eight thousand cars against 2,056. Have you any explanation for that marked decrease in the number of cars through Portland, or was that eight thousand figure the one covering the period when (2986) the two lines were under common control?

A. No; that was during the railroad administration period. That is accounted for by the conditions that I explained on Saturday, the arbitrary routing during the railroad administration control.

Q. Discussing the lumber industry, as I recall, you discussed the increase in use of lumber substitutes. Are any of those substitutes being manufactured in Oregon, or are plants being constructed for the manufacture of those products in the State of Oregon?

A. Well, there are some substitutes manufactured in this territory, such as plaster board, but there is nothing like the fibre substitute that I know, any plants in this territory that are in prospect.

Q. Aren't some of the mills, lumber mills, now under construction being equipped to utilize all waste products in the manufacture of substitutes, lumber substitutes, or do you know about that?

A. I don't know just what you have in mind, Mr. Ellis. If it is built-up lumber, why, there are. There are mills or plants in this territory that are taking veneer for the surface and filling the veneered slab with a composition, sawdust, making a board that way. (2987.)

1622 Q. Well, is it not true that the percentage of the substitute material is rather small as compared with the percentage of use of the lumber itself?

A. Well, the substitutes are taking the place of a great deal of common lumber and the purpose for which lumber is used. I don't know what the percentage would be. Those substitutes are being manufactured in the East, principally. A small proportion is made out of built-up lumber. I wouldn't say the substitutes manufactured in the East are mainly made of cane fibre and similar materials; there are wallboards.

Q. You made the statement in connection with the cross-State line and the short hauling of the Southern Pacific that it wasn't conceivable that the Southern Pacific would short haul itself. I am wondering what difference there is in that situation of the Southern Pacific short hauling itself on the western end of the haul on eastbound traffic and the situation which is disclosed in your testimony whereby the Union Pacific is short hauling itself by turning over western Oregon traffic (2988) to the Southern Pacific at Ogden?

A. Well, the Union Pacific connects with the Southern Pacific at Ogden, and if freight is routed via Union Pacific—Southern Pacific and we arbitrarily carry that—and the Union Pacific system lines arbitrarily carry that carload of freight, for example, to the Portland gateway, under the law we would be obliged to give the

Southern Pacific all revenue from Ogden to destination in western Oregon.

Q. Well, is that not the identical situation that exists on the western end—the Southern Pacific would be connecting with you at Crescent, or at Portland and wouldn't they be required to give you the long end of the revenue, as well, if they carried
1623 it through Ogden?

A. You are confusing two different situations. The situation I refer to is the control of the movement or solicitation of the movement before it starts, and what I had reference to by the Southern Pacific short hauling itself, they use every influence they can to secure from the shipper the long haul, and after the shipper routes the traffic it must move the way it is routed.

Q. Then the solution for that problem, or the changing of the routing in any way, would have to come about through some difference in the method of solicitation in western Oregon, if the (2989) cross-State line is to have a proper share of the traffic?

A. I wouldn't say difference in the method of solicitation, because I don't know of any through line that doesn't undertake to secure the long haul on the traffic it originates.

Q. Would you say, or do you know, whether the existing practice in the routing of western Oregon traffic is governed or affected in any way by any agreement between the Southern Pacific and the Union Pacific arising out of the control of the Central Pacific as recently approved by the Interstate Commerce Commission?

A. Not from the Southern Pacific lines.

Q. You are certain that the Southern Pacific Oregon lines are not affected in any manner by any agreement between the carriers concerning the Central Pacific?

A. I think that situation was fully covered by the Interstate Commerce Commission's order in that case. The order only applied as far north as Klamath Falls and Kirk at that time. It only covered the Central Pacific lines. Aside from that, I know of no other arrangement arising out of that same situation that might affect the routing of western Oregon traffic.

1624 Exam. ROGERS. Mr. Lounsbury, routing east via the cross-State line (2990) would, I take it, depend on the establishment of through rates?

A. Yes, sir; and more than that.

Exam. ROGERS. And on the through rates, other than a voluntary establishment or agreement by the Southern Pacific, before they could be forced upon the Southern Pacific consideration would have to be given to section 15, paragraph 4, as to the short haul of the Southern Pacific?

A. I would think so. (2991.)

Q. (By Mr. ELLIS.) I believe in connection with the routing of western Oregon traffic you suggested that the Union Pacific would have nothing to offer to the western Oregon shipper to get the

traffic; wouldn't an advantage in distance of three or four hundred miles under existing conidtions and under circumstances making it important for shippers to reach their market in a short period of time, be an advantage important enough to secure for you a large portion of this traffic?

A. I don't believe it would prove any more so than the past experience with the Portland gateway. The saving in distance from many Willamette Valley points would be greater, but that saving in distance is overcome by other considerations which I pointed out in my direct testimony.

We do get the greater proportion of the broccoli shipments from Roseburg, solely by reason of the saving in distance, through the Portland gateway, but if that distance were to be shortened two or three hundred miles or more, or even one hundred fifty miles, I don't think our proportion of western Oregon traffic would increase substantially. I think that the business would still move through the Portland gateway. (2992.)

1625 As to how far south the Willamette Valley goes: It is just below Cottage Grove. There is a mountain divide between the Cascade and Coast Ranges, down near Leona.

Q. In all of your exhibits, Mr. Lounsbury, have you, or in any of them, in making rate comparisons via the cross-State line route and via other gateways, used any other basis of rates for the cross-State line than a combination of locals, or any other basis of rates via other junctions than a joint through rate basis?

A. I set forth in the introduction of the exhibits where I had used the combination of locals, and where I had used continuous joint mileage. I used combination of locals in most all cases, except where I used the State commission's intrastate continuous-mileage scale on grain, potatoes, onions, hay, and straw. But I was not sure in my own mind whether that scale would apply on a new line which was not in existence at the time the order was made. I showed it there and I used it in some cases. (2993.)

Q. (By Mr. ELLIS.) In connection with your Exhibit 56, showing market prices at San Francisco and at Portland, I was not quite clear as to your conclusion or comment with reference to the difference in prices. Was it substantially this: That although the market prices at San Francisco were most often higher than at Portland, the additional freight rate to reach the San Francisco market more than offsets the difference and, therefore, the producer of livestock could sell at a greater net in the Portland market than he could in San Francisco?

A. Substantially so. I stated there were cases when that condition would exist.

1626 Would that be the situation confronting the livestock producer of southwestern Idaho and eastern Oregon in the event his distance to San Francisco should be reduced several hundred miles?

A. Yes; I don't think his freight rates would be any less than they are now, except from the territory west of Ontario. On the other hand, the same situation with respect to the San Francisco market exists at the north Portland market at certain periods of the year, when the north Portland market is higher than the California market. I can't say that the San Francisco market is higher, as a rule.

At this time I can't say that a difference of 300 or 400 miles in distance would make any difference (2994) whatever in the freight rates on livestock.

Q. But your conclusion with reference to Exhibit 56 was based entirely on the assumption that there would be no difference in the freight rate via the cross-State line, or as against the Portland or the Ogden gateways?

A. Except from the Crane-Burns territory there would be some advantage in freight rates to San Francisco under the present rates.

Q. In your Exhibit 57, showing livestock shipments interchanged with the Southern Pacific Company, I note under the heading "Delivered to S. P. Company," year 1926, under the column "Switch," 365 cars, while under the heading "O. S. L." you have listed only eight cars of all kinds of livestock. Does that mean that only 8 cars of livestock moved from Oregon Short line points to Southern Pacific points during the year 1926?

A. Through the Portland gateway; yes.

Q. Does that mean exactly that no more cars moved through
1627 the Portland gateway, or might some of the movement be included in this 365 cars under the heading "Switch"?

A. Some of the movement might be included, but my opinion is that there is some Short Line movement in that 365 "Switch"; but, if so, they were shipped to the Portland market and sold there and reshipped as a new shipment from (2995) the Portland yards to California or southern Oregon.

Q. As livestock is now handled through the Portland stockyards destined to San Francisco, is it not the usual practice for them to be shipped to Portland and sold and then picked up by buyers from San Francisco and shipped through as a new shipment from Portland to San Francisco?

A. The first part of your question is wrong, in that they would not be billed through to San Francisco and stopped at Portland to be sold. They might be stopped at Portland for feed and rest. But there are buyers from the San Francisco market who frequently buy stock in the Portland yards that is moved in from all the northwest territory and is sold on the market in the Portland yards. When that stock is bought by a San Francisco buyer it is shipped as a new shipment and pays the Portland-San Francisco rate, and would appear in this 365 total under the column "Switch," rather than under the column "O. S. L."

I would say there are undoubtedly some shipments from Idaho in that 365 total that actually did originate on the Oregon Short Line. (2996.)

Q. Referring to your Exhibit 58, showing wheat rates, will you explain why, in making this comparison, you used the destinations of Salem and Eugene on shipments originating at main line
1628 and branch line points of the O.-W. along the Columbia River, and then used the destination Portland when you applied your rates to the cross-State movement.

A. As I recall it, there was some testimony presented to the effect that there would be a heavy movement of wheat from southern Idaho to Portland over the cross-State line, and for that reason I showed this statement as a comparison, notwithstanding the fact that the distance by the main line through Huntington is considerably less. The showing of the wheat rates from The Dalles and east to Salem and to Eugene is entirely a separate statement; it has no relation to the other, and I made that with the idea that the dairymen in the Willamette Valley could and do, or the miller in the valley could and would purchase his wheat in the Columbia River counties and along the O.-W. R. & N., where the distance is shorter than in southern Idaho.

Q. With reference to the movement to Portland, then, if the claim was made that the wheat was to move to Willamette Valley points south of Portland rather than to Portland that latter comparison is of no particular interest or importance?

A. Except that you will find the relative difference in the (2997) rates in another exhibit which I presented. In Exhibit No. 62 you will find the same relative difference on wheat as on hay. If you want to get an idea of the difference in rates, just use the relative difference on the hay.

Q. Now are there not some very practical reasons why western Oregon dairymen would desire or buy the wheat from the irrigated areas of southwestern Idaho and eastern Oregon rather than the wheat raised on the dry areas in along the Snake?

A. I don't understand that the dairymen in western Ore-
1629 gon buy any wheat at all. My understanding is that the wheat that goes into western Oregon is bought by the mills, and that is very small.

As to the claim of the agricultural agents of western Oregon that they desire the wheat and other grains from the irrigated areas of southwestern Idaho and eastern Oregon to use in mill feed: A dairyman using mill feed never inquires to my knowledge what kind of wheat it is made of. He inquires the price of the mill feed and he buys it from the manufacturer and the grower of the wheat does not manufacture the mill feed. The price of mill feed does not depend on where the grain is grown and the type of grain (2998); it depends upon the price the consumer can have it delivered for.

Q. Well, you know they don't use a high grade milling wheat, premium wheat, to feed livestock, don't you, Mr. Lounsbury?

A. If that is correct, then they would not use the southern Idaho wheat. The wheat raised in the irrigation districts of southern Idaho is a soft, white wheat, that is used by eastern mills, and sometimes by mills on the coast, for blending purposes. I can't say whether it is known as premium milling wheat.

In my estimates of revenue to the cross-State line, I did not include any revenue whatever from traffic now moving between Pacific coast points and southwestern Idaho and Oregon Short Line points, either east or westbound.

Q. It was your assumption as a basis for your estimate that all of that traffic now moving would continue to move via the present routes regardless of any saving in distance via the cross-State line?

A. When you say all that traffic, that is a pretty broad question. (2999.)

1630 Q. Well, I mean such traffic as now moves between the points that I mentioned to the coast.

A. I would say that it would continue to move by the present lines. That was the basis of my estimate.

I did not include in that estimate any allowance whatever for possible diversion of western Oregon traffic to transcontinental points. I made allowance only for the limited amount of traffic that might originate on the line and be received at points on the line, both in and outbound. There is no bridge traffic included in my estimate.

Exam. ROGERS. Mr. Lounsbury, I wasn't certain about your answer to a question asked by Mr. Ellis, as to the present division between the Southern Pacific and another line. (3000.)

The WITNESS. He was asking me whether the Union Pacific system lines were dissatisfied with the divisions which the Southern Pacific receives south of Portland; I could not say that we are; that is, so it would tend to detract from the solicitation of that traffic, and I said that is not the case.

Mr. ELLIS. The point I am trying to make is that I think the divisions through the Portland gateway are so small they can't afford to handle it that way and don't want it.

Mr. SPENCER. Do you mean to the O.-W. R. & N.?

Mr. ELLIS. Yes.

Exam. ROGERS. Well, I didn't know what the facts were. I just though maybe that if later it came to a discussion between the Southern Pacific and the U. P. lines as to divisions Mr. Lounsbury might be faced with a statement that they were satisfied. (3001.)

Mr. SPENCER. You don't have any jurisdiction over the making of divisions and don't know whether they would be satisfactory or not; do you?

A. No, sir.

1631 Q. (By Mr. MCCULLOCH.) Mr. Lounsbury, on Exhibit 54, your estimate of traffic and revenue from the cross-State line, one column is headed "Suggested through rate." As I understand

it, the revenues computed on this exhibit are computed in every instance on the basis of full combinations of locals where the movement would be over two or more lines; is that correct?

A. Except as to wheat, barley, oats, and potatoes, I have used the intrastate continuous distance rates for joint hauls. In those instances that would make very much less than the full combination of locals.

Q. Would those exceptions amount to very much in money in your total estimates shown on this exhibit on those particular commodities?

A. If you used the combination on those commodities where the movement is shown to and from Portland, you could increase them by about 40 per cent, I would say off hand. (3002.)

Q. All right. Now in the last column, on sheet one of Exhibit 54, you have shown what you call "Gross revenue, Crane-Crescent Lake line." With the exception, then, of wheat, barley, oats, and potatoes, these gross revenues shown on that column are ascertained by multiplying the tonnage by the local rate per ton that you estimate would be applicable for the haul over the cross-State line; is that correct?

A. Yes; that is true with respect to combination with Crescent Lake, but the method of using full combinations is not altogether true with respect to traffic that I have estimated would move through Crane. I have used some arbitraries in that case instead of locals.

Q. What is the basis of class rates between Portland and points on the line up to Crane and west of Ontario, at the present time? Are the class rates the full basis of combination on

1632 Ontario, or something less than the full basis?

A. Well, my understanding is the class rates at present are based on arbitraries from Ontario to Crane, and arbitraries from Crane to Burns. (3003.) But after October 1st we will have continuous rates from Portland to Crane, class rates. The arbitraries from Crane to Burns will still apply.

Q. Now, those class rates after October 1st to Crane, will they be on the standard mileage basis for the distance? When I say the standard class rate basis, I mean on the basis for that distance of the class rates applying east and south from Portland.

A. Not altogether; no. They will be on the Portland class rate distributive scale, with the mileage of the Oregon eastern branch computed on the basis of one and a half for one.

There are a few commodity rates in effect between Portland and points between Ontario and Crane or Burns at the present time. These commodity rates are less than the full combination of intermediate factors on Ontario.

If the cross-State line were built we would contemplate from Portland via Crescent Lake class rates to points on the cross-State line no lower than the full combination on Crescent Lake from Portland. (3004.) That is what my testimony contemplates.

Q. And if the cross-State line were built your idea would be that the class rates from Portland through Ontario and then west

through Crane and out onto the cross-State line, I suppose, would be on the basis that you say they will be carried on and after October 1st to Crane; that is, the standard distance scale, but with the distance from Ontario west computed at the rate of one and a half miles of constructed mileage for each mile of actual distance.

1633 A. Well, that is the situation now. The combination from Portland on Crescent Lake going east from Crescent Lake in the class rates would reduce the Burns and Crance rates as in effect through Ontario, on account of the shorter distance. But as you go east of Crane just a short distance you would run into equal rates.

The purpose of estimates of tonnage and revenue in my Exhibit 54 was to establish the fact that the local traffic on that line would not, in my judgment (3005), support the line, and that it would be very small. I was very careful in making up this estimate to put in everything in the territory that might be considered tributary to that line. I think, as a matter of illustration, I put an imaginary sawmill on the line and figured the revenue from that after two years, but I know of no one who would put in the mill; and I had a very complete estimate of the livestock on these different projects and computed the turnover about the same as Mr. Teutsch did, to arrive at my carloads. I took into consideration Mr. Emerson's statement about the traffic that would be produced from Alkali Lake; one or two cars a day. I showed what that would amount to.

Q. (By Mr. McCulloch.) Mr. Lounsbury, applying this same method that you have used in estimating tonnage and revenue from this cross-State line to the Rogerson-Wells branch of the Oregon Short Line, you believe a similar result would be reached as shown on this exhibit? (3006.)

Mr. Spencer. Well, I object to that as not cross-examination.

The Witness. I don't know.

Generally speaking I am familiar with the conditions on the main and branch lines of the O.-W. R. & N. system, however, as to the traffic they produce and originate and what is destined to points on these branch lines.

1634 Q. If you took and separated the branch lines of the O.-W. R. & N. from the main system and made computations of traffic and revenue for such branch lines separately considered on the basis you have used in Exhibit No. 54, would you show, or could you show, that any of those branch lines would be profitable and self-sustaining from the traffic originated by them and destined to them, and the revenue computed on that traffic on the basis you have used in Exhibit 54?

A. If I were going to estimate the traffic for a branch line with a main line of the O.-W. R. & N. I would estimate it just the way I did this. (3007.)

As to the existing branch lines of the Oregon-Washington Railroad & Navigation Company, in my judgment, such estimates would

show the traffic on the branch line, and it would show the movement in connection with the system lines, and that is just what I have done with this.

Q. Well, I know, but what result would you reach, in your judgment, if you made such studies for the different branch lines separately?

A. It depends upon the conditions in the territory. Now, in the territory we are discussing there is very little traffic to find, and there is no comparison between this line across the State through the desert and any other branch line we have.

Q. Take any of these branch lines—take the Heppner branch, from Heppner Junction down to Heppner, suppose you treated that as a line independent of the Oregon-Washington Railroad & Navigation Company, considering the traffic that is destined to points on it now and originates on it, and that there were no continuous class or commodity rates, but that the rates to points on that branch
1635 were the full combination of locals on Heppner Junction, and you analyzed the tonnage and revenue on that basis, as you have done it in Exhibit 54, what, in your judgment, would such an analysis show? That that line from Heppner Junction to Heppner, considered separately from the main line, as you have considered the cross-State line (3008), would be a profitable and self-sustaining line of railroad?

A. Well, in the first place, I didn't consider the cross-State line separate from the main line at all. I figured the traffic that would move on and off of the cross-State line through Crane and through Crescent Lake. Now, you can't make any comparison with the Heppner branch, because that route runs through towns and villages in the wheat fields nearly all the way from Arlington (sic) to Heppner. Now, if I were making an estimate for the Heppner branch to-day it would show much difference, because there are resources and traffic there to figure on, but there are very little resources and traffic to figure on the line through central Oregon. Here you are trying to make the point that I treated that as divorced from the main line, but I didn't so treat it.

Q. Well, have you anything more to say in answer to my questions about that particular branch, or any of the branches of the Oregon-Washington Railroad & Navigation Company? My point is this, if you chose to make an estimate of tonnage and revenue on the basis you have used in Exhibit 54 for branch lines of the Oregon-Washington Railroad & Navigation Company, generally, wouldn't it be possible to demonstrate by that method that all of the branch line operations were unprofitable and not self-sustaining?

A. I don't know. I haven't made such an estimate for branch lines. (3009.)

1636 Exam. ROGERS. Mr. Lounsbury, I think the information Mr. McCulloch is attempting to get is this—were you a traffic witness in the case involving the extension of the line from Bend to Burns?

A. Yes, sir.

Exam. ROGERS. I notice that the commission said in that case that the line would not be operated at a profit in and of itself, but as a feeder it would be profitable. I take it that is what Mr. McCulloch had in mind.

Mr. MCCULLOCH. Exactly. That is just exactly what I have in mind. Have you anything to say as to the use of the cross-State line, or of the function of the cross-State line, as a feeder both for the Union Pacific system lines and for the Southern Pacific, with which it will connect on the west? In your judgment, would it have any value whatever as a feeder line to either the Union Pacific system lines or the Southern Pacific lines?

A. I don't think as a feeder line that it would be profitable to the Union Pacific system lines. As to whether it would have any value as a feeder (3009) I don't believe the Union Pacific system lines off of that cross-State line would receive very much more traffic than they now receive from that territory which comes to them at Crane and Burns or Bend.

The Sumpter Valley Railway connects with the Oregon-Washington Railroad & Navigation Company at Baker. The Sumpter has an eighty mile line extending from Prairie City, Grant County, to Baker. The Sumpter Valley Railway is an independent connection of the Union Pacific system lines. It is of value as a feeder to the Union Pacific system lines because it has something to feed to the Union Pacific system.

Q. And yet you don't believe that the cross-State line,
1637 when built, even if considered an independent line, would have any value as a feeder to the Union Pacific system lines?

A. Not enough to offset the additional cost of operating such (3011) a line.

Q. Well, Mr. Lounsbury, suppose the Union Pacific system lines were not compelled to provide the investment to build this cross-State line, but it were built by the Southern Pacific, for example, or independently financed and built, so there was a connection there, under such circumstances would it be your judgment that such a line so in existence would be of no value as a feeder line to the Union Pacific system lines, assuming that the Union Pacific has no investment in that cross-State line?

A. I couldn't say it would be of no value, but I do say that such a line might take away from the Union Pacific more than it delivered to it.

Wool at the present time is all moving to the Pacific coast terminals and thence east by water from all of the territory served by the Oregon-Washington Railroad & Navigation Company lines.

I did not participate in the Boston Wool Trade Association case, docket No. 13272 (3012) involving a proposal of the Boston Wool Trade Association to make rates from all of the intermountain wool producing territory joint rail and water to the terminals and thence through the Panama Canal to Boston.

Mr. McCULLOCH. I have the brief here that was dated May 15, 1925, and it was sometime before that. There was testimony in that case by the traffic manager of the Boston Wool Trade Association giving the movement of wool from points on the Oregon-Washington Railroad & Navigation Company in 1922, which showed that 67 per cent moved via the canal, and the remaining 33 per cent by rail East.

1638 A. Yes; that was before the rates were changed by an order of the Interstate Commerce Commission denying the transcontinental carriers fourth section relief in connection with the eastbound rates. Since that time the movement has practically been almost entirely to Portland and thence by water. I should say not (3013) more than a dozen cars have moved from eastern Oregon direct east.

Q. Does your testimony, Mr. Lounsbury, contemplate the establishment of rates on lumber from the Willamette Valley on the coast group basis via Crane if this cross-State line should be built?

A. Well, if lumber rates were established that would be the basis.

Q. Does your testimony contemplate that such lumber rates would be established via the cross-State line and Crane east on the coast group basis, or are you figuring with respect to the lumber traffic of the Willamette Valley that as to other traffic mentioned in your exhibits and your testimony the rates on lumber from the Willamette Valley via the cross-State line and the Union Pacific east would be a combination of locals?

A. No; if the rates were established that way they would be on the coast basis. I don't know whether or not joint rates on lumber from the Willamette Valley via the cross-State line would be established. My estimate of traffic for the cross-State line excludes any lumber traffic from the Willamette Valley.

I don't know whether the Union Pacific lines object (3014) to the making of joint rates via the cross-State line and Crane on lumber from the Willamette Valley to all eastern destinations.

1639 Exam. ROGERS. Would it depend on the divisions?

A. That would have something to do with it, depend upon what the Southern Pacific might want to do.

Q. (By Mr. McCULLOCH.) Would there be any reason that you could give, Mr. Lounsbury, why, so long as joint rates on lumber on the coast group basis apply from the Willamette Valley via Portland on the Union Pacific system lines east, why they shouldn't be made on the same basis or no higher basis from the Willamette Valley and the cross-State line via Crane and the Union Pacific lines east, either from the standpoint of the Southern Pacific or Union Pacific system lines? Can you suggest any reason for any difference in the two situations in the two routes, and the need or desirability of joint rates on the same basis via both routes if they were in existence by one?

A. Well, I have been assuming in my testimony, and I think, that any movement of lumber via the proposed cross-State line from the Willamette Valley would be under the coast basis of rates established via that route.

Q. In your various exhibits showing revenues and probable rates on cattle and sheep and various products from the territory to be served by the cross-State line, you have used the (3015) basis in most instances of the full combination. Many of those hauls would be pretty well in excess of 500 miles, wouldn't they? That is, to various markets from points of origin on the cross-State line?

A. Going south to San Francisco from the east end would. Not coming to Portland.

1640 Q. And from points in southwestern Idaho using the cross-State line to western Oregon they would be in excess of 500 miles, wouldn't they, getting up into the valley and south?

A. Into the northern part of the valley, yes.

Q. Ordinarily, you don't make rates for a two-line haul on a higher basis than for a single-line haul when you get up into distances like that, do you, Mr. Lounsbury, 500 miles and over?

A. I don't know what 500 miles has to do with it. We make rates usually higher for a 2-line haul than for a one-line haul, but there are a great many different factors that enter into that.

Comr. McManamy. Isn't that true in the odinary (3016) mileage scale of rates—that is, is there not a point somewhere between 300 and 500 miles where there are no arbitraries allowed for a two-line haul?

A. Not in this territory that I know of. As to whether I have checked that with respect to class rate scales put in effect by the commission: We have no scales of that nature operating here that I know of, on class rates.

Mr. McCulloch. Well, Mr. Lounsbury, isn't it a fact that in the State of Oregon there are intrastate joint rates on grain and hay and potatoes between the Oregon-Washington Railroad & Navigation Company and the Southern Pacific lines on the same basis as for single-line hauls, where the destinations are considerably less than 500 miles?

A. I have the tariff here. I will look and see.

Mr. Spencer. It is all a matter of record, isn't it? You know that the commission forced it on us, and they will do it again in this case of they get it submitted.

A. The only continuous distance rates for joint line hauls that we have is this intrastate tariff prescribed by the Public

1641 Service Commission of Oregon applying on potatoes and onions, grain and articles taking grain rates, a separate (3017) tariff on hay and straw. Now, when you get up to 350 miles, single-line is 28 cents, joint-line haul 29½ cents; 400 miles, 30½ cents, single-line, 32 cents joint; 500 miles, 33 cents single-line haul, 33½ cents joint; 600 miles, 35½ cents single-line haul, and 35½ cents joint. From 520 miles to 560 the rates are the same for single line and joint line.

Q. In Exhibit 59 you show a rate of 70½ cents on potatoes to San Francisco from Ontario via Crescent Lake. Would there be any possible route shorter to San Francisco from Ontario than via Crescent Lake if the cross-State line were built?

A. No, sir.

That 70½ cent rate is a combination on Crescent Lake.

Q. Now, what justification is there, in your opinion, for a suggested rate of 70½ cents for 819 miles via the shortest possible route as against rates of 63 cents via Wells for 1,008 miles, and of 80 cents via Portland all rail for 1,153 miles.

A. I just showed what the combination would be in that case.

Q. I know, but I want to know whether you think that if this line were built the rate on potatoes from Ontario to San (3018) Francisco via the cross-State line and Crescent Lake should be 70½ cents?

A. It might be the same as applicable via Wells of 63 cents but you will notice that the rail rate from Portland is 35½ cents, and from Eugene 42 cents, so that as you go south of Portland the rates become higher to San Francisco by rail.

Q. Your use of the combination rates in these exhibits generally leads me to wonder whether that is the basis of rates that you believe ought to be made and established, in the event
1642 this cross-State line is built, for traffic moving to and from points on the cross-State line?

A. That will probably be the way they are made, or will be made. I haven't noticed the Great Northern making any through rates with the Southern Pacific through Klamath Falls.

Q. Now, would you give the same answer, Mr. Lounsbury, assuming that the cross-State line is built and the Union Pacific system lines are required to build it, or to join in its building, would you make the same answer, that the rates after the line was built ought to be the full combination and probably would be made that way?

A. Ending at Crescent Lake? The line being built by the Union Pacific to Crescent Lake.

Q. Yes; or the Union Pacific being compelled to join in the construction of the line?

A. I think most of the local rates will be made on (3019) combination on Crescent Lake.

Some of the rates to and from points on existing branches of the Oregon-Washington Railroad & Navigation Company are made on the basis of the rate factor up to the junction with the main line and then the other rate factor beyond the junction; on the Bend branch many of the rates are made by combination over Sherman.

The Heppner branch, the Condon branch, the Shaniko branch, and the Pilot Rock branch all originate a good deal of wheat. The rates on wheat from points on those branches to Portland are not the combination of the rates to the main line junction plus the rate from the main line junction to Portland, but they are all higher than the

main line junction rate. They are published as through rates, but they were built up by use of arbitraries over the main line
1643 junctions, except that in the intrastate application of the grain rates continuous distance mileage applies from those branches as a single-line haul. With the exception of the Bend branch, we apply continuous distance rates to and from points on (3020) those branch lines, but I don't think that that is comparable with a situation that you are dealing with where we are joining up with the Southern Pacific at Crescent Lake.

The rates on wheat from Bend to Portland are not fully the combination on Sherman, which is the main line junction. They are made in another way. The intrastate rates are through distance rates. The interstate rates are not. The intrastate rates being through distance rates are slightly lower than the full combination on Sherman.

Q. In Exhibit 58, in the second column at the foot of the page, you have shown from Burns to Portland on wheat via Huntington 43 cents. Is that an instance of a rate made on an arbitrary over Crane?

A. Yes; that shows a 5-cent arbitrary there, and that is the way it is made.

Q. And the rate from Crane to Portland of 38 cents, that is less, is it not, than the combination of the local rate on wheat from Crane to Ontario (3021) and of the interstate rate from Ontario to Portland?

A. Yes; that is built up on an arbitrary over Ontario.

The rate on wheat from Crescent Lake to Portland, using the intrastate tariff, would be 22 cents. From Burns to Portland a combination on Crescent Lake of 46½ cents is shown.

Q. Subtracting the 22 cents from 46½ cents would leave 24½ cents as the factor you would use for the haul from Burns to Crescent Lake in this combination?

A. I presume that was the way it was made.

1644 Q. In Exhibit 60, for the year 1926, I understand the Oregon-Washington Railroad & Navigation Company received from the Southern Pacific at east Portland 90 cars of traffic that were destined to local points on the O.-W. lines?

A. Yes, sir.

Q. Some of that traffic may have originated on the Southern Pacific, Salem and south and perhaps Eugene and south. There is nothing to indicate the source of origin of that traffic.

A. The 90 cars constitutes the entire delivery of these (3022) commodities from all points on the Southern Pacific in western Oregon.

Q. (By Mr. McCulloch.) Now, you have no information as to the particular destinations on the Oregon-Washington Railroad & Navigation Company lines to which these 90 cars went, have you?

A. No; I took this off of the interchange. Anything east of Huntington would be considered Oregon Short Line on this statement.

Q. Well, then, so far as these 90 cars, O.-W. local traffic, are concerned, with that explanation none of those 90 cars would likely have moved via Eugene and the cross-State line, even if that line had been built in 1926?

A. No, sir; none of them.

Q. Take the next column. There were seven carloads destined to points on the Oregon Short Line. Is there any reason why those seven carloads, that you know of (3023), if this cross-State line had been built, might not have moved from western Oregon via Eugene and to the points of destination on the Oregon Short Line?

A. There was one carload of walnuts and five of canned
1645 goods. The walnuts may have originated over at Newberg, which would be nearer to Portland than to Eugene. The five cars of canned goods may have originated at Hillsboro, Woodburn, or Salem, which is a shorter distance. I mentioned in my direct testimony that there are canning factories south of Salem in the Willamette Valley.

Q. Where? (3024.)

Exam. ROGERS. It would depend upon where they originated, wouldn't it?

A. Yes, sir.

There were 382 cars in that same year that moved to points on the Union Pacific Railroad. As to whether a considerable portion of these cars, had the cross-State line been built, would have moved over it and have found a shorter route to those destinations: 337 of those cars were the broccoli movement, which I think I testified would continue to move through the Portland gateway, I thought, on account of better through service that way and the better icing facilities than via the cross-State line.

Q. Well, Mr. Buck testified here that his figures of cost of construction contemplated a main trunk line standard of construction in every respect. Is it your idea that the through train service and icing facilities via the cross-State line would be inferior in standard to the standard of construction of the line, or inferior to the service and similar facilities on the line, from Portland, the Columbia River route? (3025.)

A. Well, it is my opinion that there won't be traffic to justify the fast service over that line that now obtains through the Portland gateway.

1646 Q. Now, take this 433 cars that the Oregon-Washington Railroad & Navigation Company in 1926 received from the Southern Pacific at east Portland destined to points east of the Missouri River, isn't it true that if the cross-State line had been built in that year that those 433 cars might have moved from these points of origin in western Oregon over the cross-State line to reach those destinations?

A. The bulk of that movement was broccoli. The balance might have gone the other way, except 43 cars of cherries which moved by express.

Q. Now take the next column, 9 cars to destinations west of the Missouri River—I assume that those would be to destinations reached by the Union Pacific Railroad or its connections?

A. Reached by connections of the Union Pacific west of Missouri River.

Q. Well, as to those nine cars, if the cross-State line had been built in 1926 it might have moved over it; isn't that true?

Exam. ROGERS. Where did they originate?

Mr. MCCULLOCH. All of this traffic originated in western Oregon on the Southern Pacific.

Exam. ROGERS. But where abouts on the Southern Pacific?

Mr. MCCULLOCH. Mr. Lounsbury doesn't know. (3026.)

A. This is all of the movement from all western Oregon, nine cars.

Exam. ROGERS. Well, how can you say how it would have moved without knowing the point where it originated?

1647 Mr. MCCULLOCH. Well, the only point I make, Mr. Examiner, is this, that of these seven cars to the Oregon Short Line points, the 382 to Union Pacific, the 433 to east of the Missouri River, and 9 to the west of the Missouri River, unquestionably there is a substantial number that if this cross-State line had been built could have moved to destination through Eugene and the cross-State line as advantageously from the standpoint of time and distance as via any other route. Don't you believe that is true, Mr. Lounsbury?

A. No. A very small portion. Most of the canned goods—and that constitutes most—broccoli and canned goods and prunes are the principal commodities in that list, and with the exception of broccoli, which I stated would not move that way, I think the canned goods and the prunes originated in the northern Willamette Valley counties to the greatest extent.

Referring to shipments of lumber by water to (3027) Atlantic seaboard from sawmills in Oregon and Washington located on tidewater showing the increase of that movement in recent years. A large part of that movement by water in those years consisted of rough green lumber, but it did include some finished lumber, even doors.

The rail rate per one hundred pounds on lumber from Portland or Seattle to New York City is 90 cents. The prevailing water rate on lumber from Portland or Seattle to New York City is around $14.00 a thousand, converted to a rate per one hundred pounds, on the rough green lumber, figuring three and one-third pounds to the foot, would make a pretty low water rate, something like around forty cents a hundred pounds.

Q. What I am getting at is, Mr. Lounsbury, that this lumber that is moved by water, generally speaking, has moved at (3028)
1648 rates converted into a one-hundred-pound basis, about half or less than half of the rail rate to the same destination.

A. I think that is true.

Exam. ROGERS. Well, the point you made of that Mr. Lounsbury, as I recall it, was that it was in connection with the original condition

existing at the time this line was thought of across the State, at which time there was no water movement.

A. There was no water movement via the canal at that time.

Q. That was the connection in which you mentioned that?

A. I referred to that, yes, to show the tremendous increase in the movement of lumber products from this territory through the canal.

Q. (By Mr. McCULLOCH.) Yes; now, the water rates, are they made on the basis of weight or thousand feet board measure?

A. Thousand feet.

Q. Now, do you know, Mr. Lounsbury, whether there ever was any substantial movement by rail in the past, or is at the present time, of lumber from western Oregon or western Washington to the Atlantic seaboard, rough green?

A. Why, I think so. Before the movement from the coast mills via the canal the mills in western Oregon were not at a disadvantage with other coast mills in the manufacture of green lumber or timbers, ties, and so forth. (3029.) The rough green lumber moved by rail across the country before it was surfaced and dried and a thousand or twelve hundred pounds of weight taken out of it by drying. This is true of railroad material, bridge timbers and ties and in the past there has been a considerable movement of rough green lumber from Oregon and Washington to the Atlantic seaboard. (3030.)

In recent years since the movement of lumber by water through the Panama Canal to the Atlantic seaboard has been in-
1649 creasing so largely, the opportunity to ship by water to mills in the Northwest on tidewater has enabled them to move a considerable volume of the lower grades of lumber by water to the Atlantic seaboard.

I think in the past there has been considerable movement of the lower grades of lumber to the Atlantic seaboard by rail.

Q. Don't you know, Mr. Lounsbury, that from western Oregon for the lower grades of lumber California has been practically the only market they had on account of the relationship of what they could get for the lower grades of lumber in the eastern markets to the cost of getting it there?

A. California was a consuming market, but the California market was limited and the mills sold their lumber wherever they could.

Q. Well, don't you know that the mills in the Willamette Valley particularly have never been able, by rail, to ship their lower grades of lumber even into the Middle West and the Missouri River (3031) and Chicago markets, not to mention the Atlantic seaboard markets, on account of the cost of getting it there as compared with what they could sell it for when they got it there? I am talking about lower grades now.

A. Well, I think that you will find some of the earlier mills that were in the valley that did not have dry kilns were selling some of their lumber in the eastern markets.

I would say that there has been a very substantial falling off or decrease of the percentage of rail shipments from points of origin in Oregon to Atlantic seaboard destinations in recent years.

It is true that the increased movement by water of lumber from Oregon and Washington to Atlantic seaboard destinations has
1650 been from points on tidewater, like Portland, St. Helens on the Columbia River, Westport, Wauna and Astoria, on the Columbia River; ports on Puget Sound, Seattle and Tacoma; points like Aberdeen and Hoquiam on Grays Harbor, in Washington; points like Raymond and South Bend on Willapa Bay in Washington, rather than from interior mills, like those situated in the Willamette Valley but I would add to that that mills located close to those ports, having low local rates to the ports, could enjoy some of that water movement.

As to whether the same class of lumber moves by water and by rail (3032): The ships can carry both and do carry both rough and finished lumber and the mills located on these various waters were shipping lumber by boat as compared with the Willamette Valley mills located only by rail.

Exam. ROGERS. What I was wondering about is, if it takes a month longer to ship by water than by rail, how can this factor of lessened time be of so much importance?

A. Well, I do not believe the time is very essential on the rough lumber movement, but on the finished lumber movement there is some of that even moved from tidewater points by rail.

Comr. MCMANAMY. Now if that is true, Mr. Lounsbury, does not somebody have to absorb about $15.00 a thousand difference between the rail and water rates?

A. I don't think it would run that high, Mr. Commissioner.

Comr. MCMANAMY. I was basing it on the water rate between 40 and 50 cents, and 3½ pounds per foot. (3033.)

1651 A. Well, that is true of the green lumber, but the kiln dried lumber of the fir will more nearly average 2,500 pounds to the thousand.

As to whether kiln dried lumber is shipped to any substantial extent by water: I can't tell you to what extent. I understand they put the kiln dried lumber in between the rough lumber in loading a ship. They even put finished doors in between rough lumber below decks.

Q. (By Mr. MCCULLOUCH.) Mr. Lounsbury, I just wanted to call your attention to the figures on sheet two of Exhibit 53 of Witness Cornwall, in which he shows that from Oregon, for the year 1920, the rail movement was 72 per cent; then he gives it for each year down to 1926, and shows the movement in 1926, 71 per cent by rail. Do his figures in that respect correspond with your understanding of the facts as to the percentage of rail movement of lumber from Oregon, of the total that goes by rail and water?

A. So far as I know, his figures are correct. In my illustration I use the average of the Oregon rail and the percentages of the Oregon

rail and Washington rail show the percentage of increase by water. You will note that the increase by water from Oregon is greater than the rail decrease for that period. (3034.)

I notice that the incease of shipments by water has been very much more marked from the State of Washington than from the State of Oregon.

Q. And the decrease in shipments by rail from Washington has been very much more marked than in Oregon, where it has remained in seven years practically stationary; isn't that true?

A. With fluctuations between '20 and '26, that is substantially true, so far as the rail movement is concerned.

1652 It is the same class of lumber going from Washington and Oregon, west of the Cascades.

Some excerpts from reports of Government investigators of the Alkali Lake deposit, which I read in my testimony discussed some other products than the particular product in regard to which Mr. Emerson testified, I believe. These reports were confined to soda ash, sodium carbonate, and other products, I believe.

Q. Well, as I understood, and I listened to them carefully, they did not discuss the soda ash or sodium carbonate.

Mr. SPENCER. I am sure they did. They speak for (3035) themselves, however.

My testimony was based on the assumption that if the cross-State line were built Williamette Valley lumber shippers would still use the lines now existing for shipment east and not route their lumber via Crane.

Q. Would your opinion be changed in any way as to the possibility of the cross-State line being a practicable project if built, if after it was built the Williamette Valley lumber shippers, instead of routing their lumber either via Portland or via Roseville did consistently route it, or a large part of it, via Crane and the cross-State line, would that change the conclusions that you have had to offer as to he practicability of this cross-State line project?

A. That is a pretty large question.

Q. You mean route all the lumber that way?

A. Yes; or a very substantial part of it.

Exam. ROGERS. I think you said all of the Willamette Valley mills.

Mr. MCCULLOCH. Well, say, Salem and south.

1653 A. I don't think it would.

Exam. ROGERS. Why not, Mr. Lounsbury? (3036.) As I understand, practically eighty per cent of all the western Oregon traffic is lumber; if you are going to get all of it over the cross-State line from Salem south, why wouldn't that change your exhibit?

A. Well, I don't believe, in the first place, you would get all of it from Salem south over the cross-State line, because——

Exam. ROGERS. The assumption, for the purpose of the question, is that it would move that way?

Mr. MCCULLOCH. My assumption was based on testimony given by the witness Magladry in this case.

The WITNESS. Well, I can't figure on the lumber that was contained in his estimate, because he used the capacity of mills, while my figures were based on the actual movement; the total lumber moving from western Oregon via the Portland gateway as shown in Mr. Wiggins' Exhibit 50 was 5,512 cars, via the Ogden gateway, 20,030 cars. In my previous statement, I said that 60 per cent of this lumber originated in the territory of Albany (3037) and north, including the Yaquina branch and the Mill City branch of the Southern Pacific. Now, if 50 per cent of this movement were south of Salem, that would be approximately 12,500 cars, and whether or not that would justify construction of a cross-State line I don't know without giving it some further consideration.

Q. Do you know, Mr. Lounsbury, what considerations there are, if any, that make the use of the Rosevill gateway for lumber from the Willamette Valley destined to eastern points any more desirable now than it was in 1905, or its use was in 1905, at the time the Oregon Eastern Railway was projected and partly built? And when I ask that question I want to keep in mind that you explained that at the time in 1905 when the Oregon Eastern Railway was projected and partly built in subsequent years, all the traffic from west-
1654 ern Oregon had been moving through the Portland gateway; that that gateway had been congested by the movement, and that it was not considered essential to have a new and shorter route to relieve that congestion, and, therefore, this Oregon Eastern Railway was projected and partly built, with no attempt at that time, when the two systems were merged, to use the alternative route east via Roseville. Now I want to know what considerations there are at the present time that make the use of the Roseville route for lumber traffic from western Oregon destined to eastern points more desirable than it was in 1905 and (3038) subsequent years, when the construction of this cross-State line was undertaken.

Mr. SPENCER. Now I object to the submission of a question so involved and all-embracing as that, and particularly because there are assumptions there that are not sustained at all by the record or by any testimony in the case. There is not any testimony in the case that the Portland terminals were congested. There is testimony in there with the anticipated movement from western Washington and the continued movement from western Oregon and that which would be developed with the new construction that was known in western Washington, that then the Portland terminals might become congested. But the evidence shows that the western Oregon business went by another route, western Oregon rails are operated in a different way with a different system and the Washington business has gone by water to the extent of about——

Exam. ROGERS. Mr. McCulloch, in your question do you mean desirable from the viewpoint of the carrier, or desirable from the viewpoint of the shipper?

Mr. MCCULLOCH. Yes; desirable from the standpoint of the carriers involved.

Exam. ROGER. The carrier only?

1655 Comr. MCMANAMY. The question was simply this, as I understand it: What is there at this time that makes the Roseville route more desirable than it was in 1905? (3039.)

Mr. MCCULLOCH. Yes, sir; if any. The use of it from the standpoint of the carriers.

A. I don't know. My recollection is that prior to the merger the western Oregon business was moving through the Roseville and Ogden gateways, and after the merger was dissolved that the business again flowed that way.

Q. (By Mr. MCCULLOCH.) Now could you answer the question from the standpoint of the shipping public, what considerations now make the use of the Roseville gateway for lumber traffic of western Oregon more desirable than the existing route via Portland or the proposed cross-State line route via Crane, if any?

A. I would answer that by saying that a lumber mill located in the valley on the Southern Pacific rails is practically in partnership with the originating line, and that the owner of that mill is going to favor the originating line with the long haul, to a large extent, on his business. I think that also answers the previous question.

Exam. ROGERS. What about these differences between 1905 and now as viewed from the standpoint of the carrier only, relative to the Roseville route and this route? Is not one difference as it is now that the P[illegible]land route gives the Southern Pacific no haul, comparatively speaking, whereas before (3040) it did not make any difference whether it went via Roseville or Portland, it was all in the same pocket?

A. That is true; the originating line being the Southern Pacific, they would naturally desire to take the long haul. That did not exist during the period of the merger.

1656 Redirect examination:

Regarding divisions obtaining between the O.-W. R. & N. or the Union Pacific system and the Southern Pacific, as to the routes over which divisions obtain between the Southern Pacific and the Union Pacific system lines: Through the Ogden gateway, the Wells gateway and the Portland gateway.

These divisions are determined by the chief traffic officers in Omaha and San Francisco subject to review and approval by the chief executives of the roads. I have nothing to do with that. (3041.) I have nothing to say about what the divisions will be.

Q. Is it your function as general freight agent to say whether traffic divisions are satisfactorry, or what they should be? Or do you desire to be understood as trying to say so here?

A. No, sir; I have no jurisdiction over the division.

Q. Now do you know whether the traffic through the Portland gateway is rejected by the O.-W. R. & N., or not desired by the O.-W. R. & N., because of the large divisions enjoyed by the Southern Pacific in that traffic originating in western Oregon?

A. Absolutely not.

I am an official of the O.-W. R. & N.; not of the Oregon Short Line or the Union Pacific. I have been in the traffic service for upwards of thirty years.

I have never tried to turn back any traffic that I could get anywhere. (3042.) In my opinion the divisions through the Portland gateway have no influence on the action of the shippers in failing to give the O.-W. R. & N. that business through the gateway. And we are just as active in handling and endeavoring to secure the traffic and get all we can through the Portland gateway.

Comr. McMANAMY. As a matter of fact, as part of the traffic organization you don't consider divisions when you are attempting to get traffic over your line, do you?

1657 A. No, sir.

Comr. McMANAMY. If somebody else has said the divisions are satisfactory, that is sufficient for you—you try to get the traffic?

A. We are charged with the responsibility in getting all the traffic we can.

Exam. ROGERS. And do you, as a traffic man, know whether the divisions that you are getting are compensatory or not, when you are trying to get the traffic to move under a given rate?

A. The assumption is that when a given rate is made, that the divisions are satisfactory, and our business is to secure the business (3043) wherever we can. We can handle all the business that we can get. By assumption, I mean the assumption by the traffic officers that are soliciting the business.

I am a traffic officer and in charge of traffic solicitors.

In answering the examiner's question, I did not undertake to determine, or analyze, or ascertain when rates are in existence and tariff provisions obtain, whether the divisions or rates are profitable, from an operating standpoint.

Exam. ROGERS. Mr. Lounsbury, in answer to a question by Mr. McCulloch you said that if 12,000 cars of this lumber would go via the cross-State line——

A. I said it would approximate 12,500 cars.

Exam. ROGERS. You also said you would have to figure on (3044) that to see whether that would change your conclusion as to the cross-State line.

A. I haven't made any calculation on what that would mean, other than about 33 cars a day of 300 days in the year. I did not take that revenue into consideration, and even if I did I doubt if it would be sufficient to sustain that line.

Exam. ROGERS. Well, if ten cars off the Burns branch a day justified that 30 miles as a feeder proposition, why wouldn't the 30 cars a day off of this line as a feeded proposition justify it?

1658 A. Well, the 10 cars a day was not all the traffic involved in the extension of the line from Crane to Burns. I think I figured on the operation of a 250,000 foot mill a day and at 25,000 feet to the car, 300 days' operation would figure 10 cars.

As to whether a mill runs like that; it would not start in the first year to give us that entire output, but eventually it would get up to that after it had gotten storage in the yards, and so forth.

Exam. ROGERS. Of course all of this is assuming you are going to get the 12,000 cars; that is the assumption, of course.

A. Well, that is just a hypothetical question, because I don't know of any consideration under which that 12,000 cars could (3045) be obtained for that route.

Exam. ROGERS. I know, but I was just thinking about your answer to the question, when you said you would have to figure on it. My point is whether you would have to figure very long or not, if you knew you were going to get the 12,000 cars.

A. I could not settle that question myself. It would have to be considered by others as well as me.

R. WIPPRECHT was thereupon produced as a witness on behalf of defendants, and, having been duly sworn, testified as follows:

Direct examination:

I am auditor of the Oregon Short Line Railroad Company, which operates the so-called Burns-Ontario branch extending from Ontario, on the (4046) Oregon Short Line, into Burns, for the account of the Oregon-Washington Railroad & Navigation Company, and has operated it during its entire operating history.

1659 I have an exhibit, taken from the records of the Oregon Short Line Railroad Company as the operating company, reflecting the gross operating revenue and operating expenses, and so forth, reflecting the operations of this Oregon eastern branch for the years 1925, 1926, and 1927.

My position with the Short Line is auditor of disbursements.

The above-mentioned exhibit is comprised of five sheets. Sheet one shows, opposite item 23, a red net railway operating income, or deficit for the three years covered of more than $200,000 for each year (3047). The word "red" opposite item 23 shows a deficit; in the other items it enters into the calculation of the income and denotes debits.

Q. Now do you know whether during that period of 1925 to 1927, inclusive, there was more than the ordinary business enjoyed by that railroad as compared with its operation in previous years?

A. There was some unusual freight business enjoyed, as shown by the footnote on the first sheet of the statement, due to construction of the line to Burns and beyond Burns by the Fred Herrick Lumber Company.

The line from Crane to Burns was opened December 24, 1924.

Q. Now in arriving at this, you had to apportion the revenues, I assume, largely to this branch freight revenue?

A. We have credited the branch with all the revenue that accrued on it, on freight business and passenger business, and where the revenue accrued in conjunction with a main line, or some other haul, it was necessary to apportion it to give the line its proportion of such

earnings. We apportioned the local traffic on a mileage basis, giving the Crane line a constructive mileage of 1¼ miles for each mile of its service as compared to a straight mile on the main line;
1660 and in doing this we allowed a minimum of 25 per cent to the line performing the short haul with the local rates as the maximum. There were some exceptions to this, but that was the general formula. I might say there that the intention in apportioning the revenue was to give the Crane line a liberal revenue on the same basis as though it were an independent line. I think this is a liberal allowance for a branch line.

Comr. McManamy. How does that compare with the divisions which probably would obtain if it was a separate line?

A. This formula was taken, or rather was given us by our traffic people and was taken from an arrangement of that kind that is now already in effect. It is an O.-W. arrangement. I don't recall the line but it was furnished by the O.-W. traffic people.

[Mr. Spencer believes it is the division allowed the Oregon Trunk on the operation in connection with the S. P. & S.] (3049.)

(The statement just discussed was received in evidence, marked "Defendants' Exhibit No. 64, Witness Wipprecht.")

I have a statement showing the cars and tons for carload freight segregated by commodities, the tons for less than carload freight forwarded from and received on the stations of the Oregon eastern and Brogan branches. It was prepared by my department from the books of the Oregon Short Line Railroad Company.

(The statement was offered and received in evidence, marked "Defendants' Exhibit No. 65, Witness Wipprecht.") (3050.)

I have a statement showing the number of cars and tons of commercial freight by commodities for carload traffic and less
1661 than carload traffic, by destinations, on the traffic originating at California points and delivered to the Oregon Short Line at Wells, Nev., during the period February 15, 1926, to December 31, 1926; also similar traffic for the year 1927.

(Said statement was offered and received in evidence marked "Defendants' Exhibit No. 66, Witness Wipprecht.")

This statement shows the commodity, destination and origin.

I have also a statement showing the cars and tons of commercial freight by commodities originating on the Oregon Short Line Railroad, exclusive of the station Armco, Idaho, to Wells, Nev., and destined to points beyond Wells, Nev., segregated as to traffic destined to California points and to all (3051) other points, that is traffic going through the Wells gateway.

(Said statement was offered and received in evidence marked "Defendants' Exhibit No. 67, Witness Wipprecht.")

Armco is the first station south of Rogerson, something like 20 miles south of Rogerson.

Here also is a statement showing the number of cars and tons of commercial freight by carload and tons of less than carload originating on the Oregon Short Line, exclusive of the Rogerson-Wells

Line, and destined to points on the Rogerson-Wells Line, that is from Rogerson, Idaho, to Wells, Nev., inclusive, during the period February 15, 1926, to December 31, 1927.

The purpose of the last three exhibits was to show the business local to the line and the business that goes through the Wells gateway to California, and from California points through the Wells gateway to southern Idaho points; and we will amplify it further by going into the western Idaho country so that it is all seggregated there.

1662 (Said statement was offered and received in evidence marked "Defendants' Exhibit No. 68, Witness Wipprecht.")

Mr. SPENCER. And of course we will contend in this connection that there is a comparison between this line and the proposed cross-State line, and that this line proceeds from a very much larger immediate irrigated producing territory than the proposed cross-State line.

There is an error in Exhibit 68. It reads February 15, 1926, to December 3, 1926. This should read December 31, 1926.

I have prepared another statement purporting to show (3053) the cars and tonnage of commercial freight by commodities, and the less than carload business originating at points on the Oregon Short Line Railroad from Rogerson, Idaho, to Wells, Nevada, inclusive, segregated as to traffic destined to points on the Rogerson-Wells line, and to points in California, and to all other points, separated.

(This statement was offered and received in evidence, marked "Defendants' Exhibit No. 69, Witness Wipprecht.")

Here is a statement purporting to show the mileage and cost of road and equipment of the road from Rogerson, Idaho, to Wells, Nev., with detail sheets attached.

(This statement was offered and received in evidence marked "Defendants' Exhibit No. 70, Witness Wipprecht.")

The total cost as indicated by (3054) this exhibit as of December 31, 1927, is $3,434,322.78, from Rogerson, Idaho, to Wells, Nev. The mileage is 94.11 miles.

Here also is a statement showing the investment in road and equipment, leased lines, material and supplies, and the operating results of the Oregon Short Line Railroad Company for the years 1924 to 1927, inclusive, but stated separately by years.

1663 (Said statement was offered and received in evidence, marked "Defendants' Exhibit No. 71, Witness Wipprecht.")

These exhibits are all based (3055) on past performance and taken from existing records showing just exactly what happened. They are not estimates or forecasts of any kind.

The Rogerson-Wells line was opened for operation February 15, 1926. (3056.)

Exhibit 70, the Rogerson-Wells income exhibit, was compiled in the same manner as explained for Exhibit 64, in that the line was allowed all local revenues and revenues moving onto and off of the line were pro rated, giving the Rogerson-Wells line a constructive mileage of one and one-quarter to every mile. Thus operated, the

deficit for each year for the portion of 1926 during which the line was operated was $44,361.06; for the year 1927, it was $40,816.14.

I have been in the auditor's office of the Oregon Short Line since February 6, 1918.

Investment account 701 of item 1 of Exhibit 71 merely includes our book investment of our investment in road and equipment as shown by the general books.

As to the commission's valuation of the Short Line (3057) I haven't the valuation figure, but as of the date of valuation June 30, 1916, the commission's original cost was something like $18,000,000 less than our book figure as of that date, I believe. Our valuation engineer claimed that our own value as of that date was something like eighteen or twenty million dollars more than the book figure as of the same date and, of course, since June 30, 1916; the charges that have been added to it since that date represent the actual charges as per valuation order No. 3, second revised issue.

1664 We have outstanding stocks and bonds but not in this account. They are outstanding as liabilities on our general balance sheet. There is nothing but operating property involved in Exhibit 71. (3058.)

Cross-examination:

It is my understanding that the Rogerson-Wells branch, the investment of which is shown on Exhibit 70, is not of standard main-line construction.

The exhibits show traffic in carloads and less than carloads, for example, No. 65, the first item in 1925, forwarded, 60 cars, 2,124 tons—that means that the commodities loaded in the 60 cars weighed 2,124 tons. The tonnage was shown in addition to the cars to obtain a comparable figure with the l. c. l. merchandise, which is added in tons only at the foot of each exhibit, I believe. The only place you would look for l. c. l. traffic is opposite the item "Merchandise."

Exhibits 64 and 70 are similarly compiled.

As to the practice of the Oregon Short Line in its auditing department of keeping its accounts and records in the form of Exhibits 64 and 70 for the operations of the various branch lines (3059): The financial statements are maintained in this form for the line as a whole, but not for any individual branch line. Exhibits Nos. 64 and 70 are the results of special studies which it was necessary to make to obtain these figures.

Exhibits 64 and 70 for the Oregon eastern branch and for the Rogerson-Wells branch, separately considered, show that as to revenues and expenses those branches are not self-sustaining.

1665 We have made similar studies to Exhibits 64 and 70 on other lines, but not so complete. We made a previous test on this Rogerson-Wells line, but on the lines and branches which have traffic, the cost of handling that traffic has shown that they could not possibly be self-sustaining. I refer to studies made in July, 1927, on our Ketchum branch, extending north from the main line

as Shoshone, Idaho, and also on the Oregon Short Line Homedale branch. (3060.) These studies were made in connection with the Utah class rates case. We have another branch-line study—exhibits ordered in connection with the Homestead branch. (3061.)

R. W. PICKARD was thereupon produced as a witness on behalf of defendants, and, having been first duly sworn, testified as follows:

Direct examination:

Mr. HART. In explanation I wish to say that "we," meaning the Great Northern, Northern Pacific, Spokane, Portland & Seattle Railway, Oregon Trunk and Oregon Electric, are a little in the dark as to our position in this case. We have been made defendants, but, as I understand it, no testimony thus far has suggested that any of these lines should be ordered by the commission to participate in the construction of this cross-State railroad. On the assumption that the joinder of these defendants contemplates something of that kind, we are offering testimony to show lack of public convenience and necessity for such construction by any of these companies, as well as in opposition to the construction of any cross-State line in that it will injuriously affect some of these companies I name.

1666 Exam. ROGERS. Well, the commission would not be found in any way by the suggestion made by witnesses as to what carriers would be required to construct any such line.

Mr. HART. I assume the commission is bound by the record and if there is no record made of any public (3062) conveniences or necessity contemplating extensions of the lines I represent I suppose there would be no basis for any order.

Exam. ROGERS. That is probably true, but the fact the witness had the Union Pacific in mind wouldn't be any reason why the commission should not determine that the Great Northern might as well do it as anybody.

Mr. HART. I assume that the commission could hardly enter an order requiring the Great Northern to extend its lines when there is no testimony requiring the extension.

Mr. SPENCER. The Great Northern is nearer the territory than the Union Pacific. We don't want to be out there alone.

Mr. DEY. They are nearer to it than the Southern Pacific.

Mr. HART. I am as much in the dark as anybody as to what it has to do with the Great Northern.

Mr. ELLIS. If I recall Commissioner Bean's testimony, it was that the Great Northern should join with the others, in his opinion.

My name is R. W. Pickard and I am general freight agent of the Spokane, Portland & Seattle Railway Company; I also hold the same position with the Oregon Trunk Railway and the Oregon Electric Railway Company.

The capital stock of the Spokane, Portland & Seattle Railway Company is owned in equal parts by the Great Northern and Northern Pacific. The Oregon Trunk and Oregon Electric are subsidiaries

of the Spokane, Portland & Seattle Company and controlled entirely by the Spokane, Portland & Seattle, except the Oregon
1667 Electric there are some few shares of preferred stock in the hands of the public and some bonds, small in comparison with the total.

Describing the lines in Oregon of these companies (3064), commencing with the main line of the Spokane, Portland & Seattle, it runs westerly from Spokane to Portland a distance of 377 miles, with one branch line extending from Lyle, approximately 85 miles east of Portland, to Goldendale, the branch line distance being 42 miles. The branch of the Oregon Trunk extends from Wishram southerly, Wishram being located 106 miles east of Portland on the main line (3065) on the north bank of the Columbia River in the State of Washington. The Oregon Trunk commences there and extends southerly to Bend, a distance of 152 miles, a part of our line and part jointly operated with the Union Pacific. The Spokane, Portland & Seattle has a line west from Portland to the Pacific Ocean, approximately 122 miles, with a branch line from a point called Warrenton to Fort Stevens.

The Oregon Electric Railway runs south from Portland, its main line, a distance of 122 miles, with short branches to Woodburn, Corvallis, and Forest Grove.

The Klamath extensions of the Great Northern, recently completed, owned and operated by the Great Northern Railway, is from Bend to Chemult, with joint use over the Southern Pacific Cascade line from Chemult into Klamath Falls. The Great Northern's investment in this extension from Bend to Chemult (3066) is approximately three million, two thousand odd dollars. The purpose of the Klamath extension as disclosed in the hearings before the commission seeking permission to build the line was the Klamath Basin and the large pine lumber tonnage that will originate in that territory.

1668 The above referred to hearing disclosed testimony which indicated that the production of pine lumber in the Klamath territory would increase substantially by reason of the construction of the Weyerhaeuser mill.

Outlining the territory in the central part of Oregon east of the Cascade Mountains which is served by the Oregon Trunk and by this Klamath extension of the Great Northern: Starting south from Wishram up the Deschutes River Canyon there is a very little production of agriculture or any other traffic to speak of until you get out of the canyon about 90 to 100 miles south of Wishram. There you run into the wheat producing country on arid lands, and continuing on to Redmond, where you first meet up with the agricultural production on the irrigation project. (3067.) Redmond is 18 miles west of Prineville. The Oregon Trunk and Union Pacific lines are connected with Prineville by a municipally owned railroad. The country near Prineville and around Bend is a stock country. Most of their production of agricultural products is in the

nature of alfalfa hay, which is used for stock-feeding purposes. Other diversified agricultural products find their principal markets in the city of Bend and city of Redmond. Continuing south from Bend on the Great Northern line to Chemult you cover about the same character of country, except for the timber that lies on the slopes of the adjoining mountains. Directly tributary to the line between Bend and Chemult there is very little development, and very little traffic, except that that is likewise a stock-raising and feeding country, and that will attract some livestock traffic to that line.

Going south from Chemult there are large stands of timber which will make lumbering the principal industry in that (3068) region.

1669 The Oregon Electric line running south from Portland traverses a country which is well developed, passes through a number of the important cities as far south as Eugene; virtually parallels the Southern Pacific the entire distance. The traffic that it is in a position to obtain, is largely fruit, the products of canneries, hops, some vegetables, but very little lumber, because it doesn't reach the lumber producing areas.

Referring to the territory east of the Cascade Mountains, to what extent the Oregon Trunk is at the present time dependent upon the lumber traffic which it secures from the two pine lumber mills at Bend; in discussing it before I didn't mention the large production of lumber at Bend, but that is so well known that perhaps it isn't important. More than 90 per cent of the traffic of the Oregon Trunk consists of lumber. It is almost entirely dependent, therefore, upon the lumber traffic for its revenue.

Q. Mr. Pickard, assuming that this case contemplates an extension of the Oregon Trunk easterly, what can you say as to whether or not the Oregon Trunk territory is now sufficiently served, or whether there is a present public convenience or necessity for any extension of the Oregon Trunk line easterly from Bend? (3069.)

A. In my opinion, there is no necessity for an extension of the Oregon Tunk east. The large forest reserves in the Ochoco National Forest are available to transportation through the City of Prineville Railway, a municipally owned railway that extends from Prineville Junction to Prineville, a distance of 18 miles.

From Bend the timber that the mills located at that point will utilize comes largely from the territory south.

1670 The country in a line due east from Bend is practically nonproductive, except that it is used for the grazing of stock, and there would seem to be little necessity for added transportation facilities.

There is nothing, in my estimation, in the territory east of Bend to-day for 50 to 75 miles which would justify the construction of an extension by the Oregon Trunk easterly, and I have been over the territory.

Q. Now, applying the same thought to the Great Northern line which runs from Bend to Chemult, assuming this case contemplates

a possible extension of the Great Northern easterly from some point on this Bend-Chemult line, what is there in that territory which might justify the construction of a railroad?

A. Well, the territory lying east of Chemult is a timbered area, and, as well, you have the marshes and the valleys that are used for stock raising. There is some production of grain in the (3070) Fort Rock territory, limited, I think, in volume. Other than that, there are no resources there that, to my mind, would warrant the Great Northern extending into that territory.

I think both the Oregon Trunk and the Great Northern adequately serve the territory they have entered.

I am in a position to know something of the amount of traffic that is being handled on the new Great Northern extension from Klamath Falls to Bend.

The Weyerhaeuser mill, recently referred to, is not yet in operation.

As to the amount of traffic handled over the Great Northern extension to-day; it was opened for operation so recently that
1671 perhaps there hasn't been sufficient passage of time to form an opinion as to what the line will ultimately do, but I have one figure here indicating the entire gross revenue of the Great Northern system on business originating or terminating on the line south of Bend from May 8th, when it was opened for operation, to May 31st, 1928, the last figu that was available at the time it was requested, was only $44,124. (3071.) That's the total earnings for the Great Northern system for the period May 8 to 31st, 1928. As to what we expected for the first 23 days of operation, we were not called upon to make such a prediction. In the usual form we were required to estimate the probable earnings for the first five years. It hasn't gone far enough so that there is much significance to the showing. That, in connection with the fact that the Weyerhaeuser mill at Klamath Falls is not completed and in operation, would mean that these figures are a poor indication, perhaps, of what may result in the way of traffic. The small amount of traffic received is offered by way of explanation. (3072.)

Q. And to indicate that the extension needs all the traffic that it can secure, and no possible traffic should be diverted to any cross-State line?

Mr. SPENCER. You mean in the Fort Rock country?

Q. Assuming that this case contemplates the construction of a cross-State line from Crane to Crescent, or from Crane to Bend, by the Union Pacific or by some other company, what effect would that have on the Oregon Trunk operation and upon the Great Northern Klamath operation?

1672 A. Well, it might divert traffic in northern Klamath County from the lines of the Southern Pacific and Great Northern in northern Klamath County that it was fully expected would accrue to those lines at the time the investment was made in their construction. I am not entirely clear as to what diversion

of Bend traffic is contemplated as the result of construction of the proposed cross-State line.

As to what diversion I would expect of Bend traffic (3073): We wouldn't expect any of the traffic that the Spokane, Portland & Seattle and the Oregon Trunk haul out of Bend to be diverted. We certainly wouldn't wish to see any of it diverted to the proposed cross-State line if it were built via Bend. I understand that the Newell proposal contemplates some of the Union Pacific traffic which they haul out of Bend being diverted to the cross-State line.

Q. (By Mr. ROGERS.) That is, the Newell study offers as one reason for the construction of the cross-State line the saving that would be made on Bend lumber traffic. Let me ask you whether or not you think there is any public necessity for routing the Bend traffic east on the cross-State line instead of turning it over its present route via the Columbia River.

A. There is no need for it, so far as I know, and so far as can be determined by constant contact with the people who are utilizing the present route, either Union Pacific or Oregon Trunk, from Bend to the Columbia River and thence east. And the same holds true with respect to Klamath Falls lumber moving north through Bend to the Columbia River and thence east over the Great Northern.

I think the saving in mileage is an unimportant factor in
1673 connection with (3074) the lumber traffic, except perhaps in isolated cases of special orders, or something of that kind, but taking by and large in the lumber traffic a difference of one or two or three hundred miles in a total haul of fifteen hundred to two thousand miles would be relatively unimportant.

Q. Now, assuming that the cross-State line would result in bringing into the Willamette Valley another contender for traffic, either by way of common user, or such rate divisions, or in some other way: What effect would that condition have upon the Oregon Electric and the Spokane, Portland & Seattle?

A. Well, the Oregon Electric, as I will show a little later with an exhibit, has never earned anything like a fair return on its investment, and any diversion of traffic from that line would only make that showing relatively worse. Certainly the Oregon Electric would exert every effort to prevent the diversion of any traffic that it is now getting. The suggestion made here very clearly contemplates the diversion of western Oregon traffic originating on the Southern Pacific lines to the cross-State line route, and in that situation the adverse effect on the Spokane, Portland & Seattle would be simply because of the large volume of traffic that is delivered to the Spokane, Portland & Seattle at Portland by the Southern Pacific for eastern movement. The Spokane, Portland & Pacific gets such traffic as the Oregon Electric originates between Portland and Eugene (3075), and also gets a substantial volume of tonnage from the Southern Pacific.

I claim that the Oregon Electric is actively soliciting freight traffic between Portland and Eugene at all times, regardless of the effect on the Southern Pacific.

The Southern Pacific was down the Willamette Valley before the Oregon Electric.

1674 Mr. DEY. Forty years earlier.

The Oregon Electric has now before the commission an application for permission to build an extension easterly from Albany into the timber on the westerly slopes of the Cascade Mountain. As to what happened when the Oregon Electric went down there, whether they took the traffic away from the Southern Pacific or did some developing of their own: That leads into a little history about the Oregon Electric construction. It was first constructed by private parties to Salem only, and with a branch to Forest Grove, as (3076) essentially a passenger-carrying line. This was prior to automobile development. In 1911 its owners extended it from Salem to Eugene, a distance of about 72 miles. While it was always a standard railway in every respect, it hadn't been a large factor in handling freight traffic up to the time it reached out its line from Salem to Eugene. Its freight business has shown some growth continuously, but with the advent of the automobile and construction of hard surface highways its passenger revenues have very appreciably declined.

As to where they got their freight traffic business: I wouldn't say that it was any particular development due to the construction and operation of the Oregon Electric, because it virtually parallels the Southern Pacific all the way down the valley, and it took traffic that was there, of course, that the Southern Pacific was handling before the Oregon Electric entered that territory. (3077.)

Q. (By Mr. HART.) Mr. Pickard, a witness has testified this morning to the effect that Cottage Grove, just south of Cottage Grove, marked the southern end of the Willamette Valley. Cottage Grove is a short distance south of Eugene, is it not?

A. About twenty miles, I think.

1675 So the Oregon Electric practically traverses the entire Willamette Valley.

Q. Now then, from Eugene to eastern destinations, such as Chicago, a cross-State line presumably would cut off perhaps 100 to 125 miles of the distance via the routes through Portland?

A. I have made no calculations as to those in respect to mileages, but I should think it would be some shorter. Perhaps that is right.

Taking the extreme southern end of the Willamette Valley, a cross-State line would have the advantage of a saving of mileage approximately to that extent, I believe. Normally, of course, the advantage (3078) would lessen as you would near Portland.

Q. Now can you think of any advantage, aside from this shortened distance, if that be an advantage, which a cross-State line reaching the Willamette Valley would have to shippers? That is, would their present situation be improved by another railroad coming via this cross-State route?

A. That would depend, in so far as the shipper was concerned, the value of the service to him, on the schedules that might be maintained over the two routes. Not always the short route based on distance gives the most satisfactory service to the shipper. It depends upon traffic conditions existing on both routes. Distance is only a factor to the extent that it would affect or bring about better service.

Q. Applying that premise to the lumber traffic, and having in mind that the entire Willamette Valley is traversed by the Oregon Electric as well as the Southern Pacific, what substantial change or advantageous change could be effected by the cross-State line, even as to shippers at Eugene?

A. I can't see that there would be any—and this seems to be
1676 a natural assumption—that the lines operating through Portland and east would naturally readjust their service, if readjustments were necessary to meet the service via the competing route.

I think a difference of 100 or 150 miles (3079) between routes on a haul of 1,800 miles is inconsequential. I think it is entirely unimportant in the lumber business.

Mr. HART. I should like to offer in evidence the annual statements for the last seven years of the Oregon Trunk, the S. P. & S., and the Oregon Electric Railway Company. I have not asked an accounting witness to come for that purpose, but can have one if it is desired. They are the same statements which were used as exhibits recently in the Docket 17000 hearing held here in Portland.

The WITNESS. They bear that heading, which should be disregarded here, and the docket number in this substituted, perhaps.

(The three statements were offered and received in evidence, marked "Defendants' Exhibit No. 72, Witness Pickard.")

These statements, as the titles indicate, show the net railway operating income and return on investment (3080) for the years 1921–1927, inclusive, for the S. P. & S., the Oregon Trunk and the Oregon Electric and the extent to which those lines earn or fail to earn a return of five and three-quarters per cent. Generally, in recent years, the Oregon Electric has operated at an operating loss.

As to what valuation we base our return: Book value, as to the Oregon Electric. With the S. P. & S., and the Oregon Trunk, they have both been valued by the commission. I think there is a slight difference in the figures. It has not been finally adjusted through the valuation department of the commission. There are no substantial differences, as I recall it, between those figures of the book
1677 value of the S. P. & S. and the tentative value that is fixed on it by the Interstate Commerce Commission.

The tentative valuations fixed by the commission on the S. P. & S. and the Oregon Trunk are not far from (3081) the investment figures.

Comr. MCMANAMY. Are they higher or lower?

Mr. HART. Slightly lower.

The WITNESS. I think I can tell you about the S. P. & S. from memory. The book value as shown here in the statement is approximately sixty-four million some three hundred fifty-six thousand dollars. As I recall it, the tentative valuation fixed by the commission was approximately two million dollars less than that.

I don't recall the figures regarding the Oregon Trunk but they were very close to the actual book figure.

Q. So that the net result, if the commission's tentative valuation was used, of these exhibits would not be much different from what is shown here?

A. They would not be materially different.

Q. (By Mr. DEY.) The $3,002,000 you say invested by the Great Northern (3082) extension from Bend south, did that include the purchase price of the logging railroad, or the 75 per cent interest in it?

A. You mean the Shevlin-Hixon line? Yes. I understand the Great Northern purchased a three-fourths interest in that Shevlin-Hixon line. I am not certain it is a three-fourths interest.

Q. That $3,002,000 carried you down to Chemult?

A. Yes, sir. But not beyond there.

Q. It does not include your investment at Klamath Falls?

A. I think likely, Mr. Dey, the figures are not separated here, but they came from the comptroller of the Great Northern. I could not answer definitely.

1678 Cross-examination:

I am not very well qualified to say whether the Great Northern's line south from Bend to Chemult is built according to the same physical standards as the Southern Pacific's Cascade line, but I should say it is not as good a line. (3083.) The distance from Bend to Chemult is 71 miles. I don't think any other road than the Great Northern has the right to use the line from Bend to Chemult.

Describing the traffic of the Oregon Electric and mentioning fruit as a principal item of traffic, it is largely dried fruit and the canned product. It handles very little green fruit. There have been attempts to ship prunes fresh from Salem but they have never been successful and have never had a substantial movement. I don't recall that the Oregon Electric has handled more than a few cars of apples.

As to the lumber traffic of the Oregon Electric, in 1927 it originated 251 cars. (3084.)

As to whether the Oregon Electric serves the Willamette Valley or western Oregon in a comparable manner with the Southern Pacific, I think not, but it compares favorably with the Southern Pacific's east side main line. It does not have the branch line mileage that the Southern Pacific has and it is serving the territory much more completely. That is particularly true with respect to the lumber traffic of western Oregon. I said that the Oregon Electric partici-

pated only to a small extent in the lumber traffic, because it does not reach the timbered sections of the lumber producing points.

I have made no detailed traffic survey of the country between Crane and Crescent Lake, generally speaking, along the route of the proposed cross-State line, as to the possibilities of traffic to be originated there or the possibilities of the country as a pro-
1679 ducer of revenue tonnage for a railroad, if that line were built, but I went over the territory pretty thoroughly and know pretty well what the character of the country is.

As to my statement that the Oregon Trunk and Great Northern adequately serve their territory. (3085.) That had reference to the Bend line from Wishram south to Bend, on the Oregon Trunk and then on the Great Northern line down to Chemult and the joint use line down into Klamath Falls.

As to the possibility of traffic from Klamath County and from Bend being diverted to the cross-State line, if that were built, I have made no estimates and could give nothing more definite than that possibility to indicate the extent of the diversion, but I spoke particularly of the northern part of Klamath County, where I understand from the Newell study it was proposed to divert that traffic via the cross-State line, and also that the study contemplated quite definitely the diversion of that portion of the Bend traffic that was now being handled by the Union Pacific. My statement was, that if it resulted in the diversion of any traffic in northern Klamath County, or from Deschutes County, which the lines which I represent were builded to take care of, that we would exert every reasonable effort to prevent that.

Q. Would you say, Mr. Pickard, that in any real sense the Oregon Electric and its connections, the Northern Pacific and Great Northern and S. P. & S. at Portland, afforded a competitive route and a competitive service for the lumber traffic generally (3086) of western Oregon to the East?

A. The S. P. & S. does in connection with the Southern Pacific. It affords a route that moves a considerable volume of the lumber traffic from western Oregon. The Oregon Electric does not.
1680 I said a considerable value of western Oregon lumber traffic was turned over by the Southern Pacific to the S. P. & S. at Portland for 1927. It was approximately 3,500 cars. I think that may be recognized as such. That was lumber alone.

Q. (By Mr. McCulloch.) I understood you to say that the Oregon Electric could not stand any more railroad competition in the Willamette Valley.

A. I don't know that I said just that. I said that the Oregon Electric would use every means at its command to prevent the diversion of any Willamette Valley traffic that is now in it, and if that were contemplated by the construction of the cross-State line, the diversion of that traffic to that line was what it would apply to.

The traffic that the Oregon Electric has had since it has operated as a freight carrier in the valley has been almost 100 per cent

traffic diverted from the Southern Pacific (3087) or substantially so. The Oregon Electric has been to Eugene since 1912 and since 1907 or 1908 has had its first operation to Salem. I think it came into the hands of its present owners about 1909.

Q. Did I understand it was your opinion, Mr. Pickard, that there would be no substantial advantage except the possible advantage of shortening of distance to the western Oregon shippers, from the construction of the cross-State line?

A. I said so far as the lumber traffic was concerned, and that constitutes such a large portion of it that I felt that the difference in distance was relatively unimportant on the lumber traffic.

Q. Well, I recall that in the Klamath Basin cases, particularly the finance docket application of the Oregon Trunk for permission to construct into Klamath Falls, the position was taken by your company that its construction into Klamath Falls would
1681 open up a large additional market for lumber (3088); to quote exactly, after referring to the different Northern lines, "with a total mileage of over 27,000 miles, reaching by themselves and connctions widely distributed markets for timber products and thus covering, by practicable and desirable routes, many States not now conveniently reached by the timber to be marketed from the territory to be served." Now I wonder, Mr. Pickard, why the situation would be any different as to the Union Pacific than it was as to the Oregon Trunk and its connecting lines?

A. Well, I can't speak for the Union Pacific, but in the Klamath extension case, as you say, we asked for permission to build in there to give those plants which were there and those which were contemplated, access to the Northern lines' markets, including the Burlington. Our position here is no different. We said in the Klamath case we felt the difference of 200 miles was immaterial, so far as the lumber traffic was concerned.

Q. But would there not be a similar advantage to the producer of lumber through the construction of the cross-State line as there was to the same producers of lumber through the construction of the Oregon Trunk or Great Northern into Klamath Falls, in that it opens up a new and additional territory for market purposes?

Mr. HART. You mean to the Willamette Valley lumbermen? Is that what you are talking about? (3089.)

Mr. ELLIS. To the Willamette Valley lumbermen and any other territory reached?

A. Well, I don't care to speak for my neighbors, but, so far as I know, those shippers have access to all of the important markets to-day with existing rates and routes.

1682 Q. Well, did they not have the same access at the time the Northern lines were applying to go into Klamath Falls? Did they not have access over the same routes, on the same basis?

A. They did not. There were no through rates in effect from Klamath Falls to the Northern lines territory. I don't know that I

could say why they were not. The Southern Pacific could probably answer that better.

Mr. HART. They could not, except via Portland, which was on the coast basis, could they?

A. Well, there were no rates via Portland to Klamath Falls.

Comr. MCMANAMY. How much of a difference in distance would you consider it necessary to justify the construction of a new line—you say to shorten it 100, 150, or 200 miles wouldn't do it—for hauls of 1,500, to 2,000 miles?

A. Well, I should think it would depend entirely upon the commodity; and then it would depend again, Mr. Commissioner, on the question of whether the longer route was able to give equally expeditious service as the shorter one, which is not an uncommon thing. I might give you an illustration of that. Take from Puget Sound to Spokane; the Milwaukee has substantially shorter mileage than either the Northern Pacific or Great Northern; the service is practically identical over all routes. So that the difference in distance there—and that total distance is only some three hundred miles. That is a shorter haul.

Comr. MCMANAMY. Suppose we take Portland to the Twin Cities when the S. P. & S. were built; how much did it shorten the line haul?

1683 A. I don't think it shortened it perceptibly, because in those days, if my memory serves me correctly, western Oregon traffic could move via Wallula in connection with the O. R. & N. thence the Northern Pacific.

Comr. MCMANAMY. I was speaking of traffic from Portland.

A. I meant Portland traffic; it could route via the O. R. & N. to Wallula, thence Northern Pacific to Twin Cities. The difference in distance was not perceptible resulting from the construction of the S. P. & S. As to whether the Northern Pacific would accept Portland traffic at Wallula: It did then; also it had its own line from Portland through (3091) Puget Sound over the Cascade Mountains. There was no perceptible shortening of distance. I don't think I can make a very definite answer to your question, because I think it will depend altogether on the comparative service.

Comr. MCMANAMY. How much was the mileage shortened between the Twin Cities and Portland by the S. P. & S. as compared with the Northern Pacific?

A. About not to exceed two hundred miles. But the shortening of the distance was not necessarily the factor which resulted in the construction of the S. P. & S. It is ancient history—the Northern lines were in very much the same position as Mr. Lounsbury testified in 1905. The S. P. & S. was started in 1905. The volume of this traffic moving all rail was so great that existing lines were overburdened, and this was an alternative route that was selected and constructed by its owners. It furnished substantial relief until such time as the opening of the Panama Canal (3092) and the

diversion of traffic to the water route. Then we find all of the lines in need of additional traffic again, that so changed the trend of traffic. (3093.)

1684 As to whether the Spokane, Portland & Seattle ever was an especially busy line, it never has been utilized to anything like its capacity, although it handles a substantial traffic. It handled 36,000 cars of lumber in 1927. Lumber is its major item of traffic.

As to how its traffic density compares with other lines: Its traffic density is greater in ton-miles, I think, than the Oregon-Washington Railroad & Navigation Company.

If the construction of the cross-State line will open up new markets to the Willamette Valley, then I would say that it would be of some advantage to the Willamette Valley lumbermen in addition to the advantage of distance.

Q. Do you recall the position of the Great Northern and Oregon Trunk as taken in the Klamath Basin cases, with reference to allowing the Union Pacific lines joint and common use of its tracks when constructed from Bend south?

A. I don't recall any such testimony, Mr. Ellis. I do know that Mr. Budd, president of the Great Northern, testified as to his entire willingness to join with the Southern Pacific part of the way in reaching the Klamath Basin. I don't recall any testimony about their being willing to let the (3094) Union Pacific use the line south of Bend. If there were such testimony, I think I would have known it. I don't recall it at all. If it is in the record, it speaks for itself.

I am not in position to make any statement as to the position of the Great Northern in that respect at this time.

Mr. Ellis. Has it not been the policy of the Northern lines generally, particularly of the Great Northern, as expressed throughout these hearings and in the press generally, to approve and advocate joint and common use of trackage under circumstances such as would exist here with the construction of the cross-State line and connection at or near Crescent Lake?

1685 A. You mean joint use, for example, from Crescent Lake to Bend or from Crescent Lake into Klamath?

Q. Both.

A. This, I think, summarizes the position of the Northern lines as expressed in the Klamath case, that they are perfectly willing to join in the use of an existing line where that can be done and that line is of such construction that they can (3095) utilize it and where to do that will avoid wasteful duplication of expenditures.

Mr. Hart. That is, Mr. Pickard, where additional facilities are justified and where otherwise there will be a duplication of capital investment?

A. In all cases assuming, of course, that the construction is at all justified.

Exam. Rogers. In the Klamath Basin case the Great Northern sought the use of some other lines, didn't it?

A. They to-day use the Cascade line of the Southern Pacific from Chemult into Klamath Falls.

I am hardly in position to say if that had anything to do with their attitude as to the joint use of track, the fact that they were then seeking the use of somebody else's track.

Mr. HART. They haven't put themselves into any inconsistent position, I may say, Mr. Examiner, on that question.

Mr. DEY. You have always favored joint use of the other fellow's track?

Mr. HART. We haven't put ourselves in any inconsistent position on that.

Mr. ELLIS. One more question. Are we to understand from your testimony that at the present time there is no need for further transportation facilities (3096) in any of this area east of your line extending from Bend south?

6186 Mr. HART. Well, that is not what the witness said. Of course there is need for a railroad where no railroad is today, but whether there is public convenience and necessity for it is another question.

Mr. ELLIS. Putting it on that basis, do I understand it to be your position that there is no public convenience and necessity requiring any additional railroad construction east of your line extending south from Bend?

A. That is my judgment about it.

I don't think the position of my company is any different now than it was at the time they applied for a certificate to extend into the Williamson River territory south of Silver Lake. That is essentially a part of an independent line which we asked permission to build in order to reach the Klamath Basin.

Q. Well, that line as you proposed it did reach and serve a substantial area of territory not reached by your present facilities, did it not?

Mr. HART. Well, the question is leaving out material facts which you know should be included, Mr. Ellis. You know that (3097) the Great Northern became a half owner of the Oregon, California & Eastern, which has the right to build up into that very region, and that territory will be served when facilities are needed. Shouldn't that be included in your question?

A. That was a part of an independent line which we asked permission to construct in order to get into the Klamath Basin territory, as far as the Williamson River country is concerned.

Q. Looking at Exhibit 3, do you recognize the location indicated on that map, the O. C. & E., as the location of the constructed railroad from Klamath Falls up to Sprague River by the Oregon, California & Eastern Railway?

A. Yes, sir. (3098.)

1687 The broken lines extending beyond there, from Sprague River up north to Silver Lake and on north and east to Lake-

view indicate projected extensions of the Oregon, California & Eastern.

I am not certain whether there is an extension under construction there now beyond Sprague River to a place called Bly. What I am interested in in this Klamath case, Mr. Spencer, after the permit had been obtained the entire matter was taken over by the Great Northern, and has been in their hands ever since that time. I have no relation with it at all.

Q. Well, you haven't heard anything about construction going on there by the Oregon, California & Eastern into Bly? Does Bly appear on the map?

Mr. HART. Yes; there is an extension under way, Mr. Spencer.

Mr. DEY. Twelve miles of new extension now being built by the Great Northern and Southern Pacific through their ownership of the Oregon, California & Eastern.

Mr. SPENCER. Now, these projected lines, there, Mr. Pickard, in any event, reflect the purpose of the Oregon, California & Eastern, as you understand it, to serve those (3099) timbered areas?

A. Yes; it is timbered area on the route extending up to Silver Lake. When that line is extended up to Silver Lake, it doesn't seem to me there would be any tonnage from the territory south of Silver Lake, the timbered country territory, to the cross-State line indicated in yellow on this map, Exhibit 3.

The Oregon, California & Eastern is jointly owned by the Great Northern and Southern Pacific.

Q. Now, you spoke of investment there of $3,200,000 in the line from Bend down to Chemult. How much of that route is covered by the existing logging railroad of the Shelvin-Hixon Company?

A. Approximately 22 to 25 miles.

1688 I understand the Great Northern has purchased that line, all of the main line, not including, I guess, logging spurs running out into the timber. (3100.) I understand t ey bought the entire line. Mr. Dey just mentioned 75 per cent interest. I am not sure just what basis it is on.

Mr. DEY. It is just hearsay with me. I haven't any information on it.

Mr. SPENCER. What is the fact as to whether they are making a survey and study there to rebuild or build another line because of the unsatisfactory physical conditions and location of that logging railroad?

A. My information is that they have had some difficulty in rehabilitating that logging line and making it suitable for their purpose.

Q. The point I am trying to make, Mr. Pickard, is whether or not the investment of three million dollars plus between Bend and Chemult does fairly reflect the investment that will necessarily be made between those termini for a railroad?

A. Not if the physical characteristics of this logging line are such that it can not be utilized to advantage as a main line by the Great

Northern. Even if it can be rehabilitated—there will be more money spent, of course, if it is to be either rebuilt or relocated, or if they have to build a new line. (3101.) They have their own survey, the old original Oregon Trunk survey adopted by the Great Northern.

Mr. SPENCER. Are you or are you not in a position to say whether or not the Great Northern Railroad Company would either sell an undivided half interest in that railroad between the junction of the proposed cross-State line and the Great Northern at Bend, or whether they would permit the Oregon-Washington Railroad & Navigation Company to use that line jointly?

A. I don't think it has ever been considered, Mr. Spencer;
1689 no such proposal has ever been made to the Great Northern.

I was here when Mr. Newell's study contemplating that kind of arrangement was presented. He said it would be logical to permit such a thing.

I did not say that the Oregon Electric found great difficulty in developing lumber traffic in western Oregon; I said it didn't participate in the lumber traffic because it didn't reach the large lumber producing points. By that I meant the mills that are in production. (3102.) And if it would experience difficulty in getting into the mills after 12 or 14 years' operation, more or less, I can't see that a cross-State line terminating at Crescent would have any opportunity. Or if it extended its line into the valley, into Eugene, as to its opportunity to obtain traffic from the production, it would certainly meet the determined opposition of the two lines already there.

As to sawmills at Eugene, just across the river from Eugene there is the large Booth-Kelly mill at Springfield, only two or three miles, but it involves the crossing of the Willamette River.

I spoke of 2,500 cars of (3103) lumber being given the Spokane, Portland & Seattle by the Southern Pacific in 1927 at Portland.

Exam. ROGERS. Do you know where that lumber originated?

A. The Southern Pacific Lines in Oregon north of Leona, the point that was mentioned here the other day as being the rate-breaking point. It was going east of Spokane. It might be Montana, the Dakotas, Minnesota. As to whether any of it went to mid-western States: I think the distribution is about as general as all fir distribution in this north Pacific coast. You will find its market in all the middle western section of the States. I can't make that any more definite without giving a rather complete
1690 outline of the rates. Leona is just about (3103) the dividing point between the Umpqua and the Willamette Valleys. It is in the Cottage Grove district. (3105.) That lumber is routed by the shipper or consignee.

Redirect examination:

Q. (By Mr. HART.) The impression may have been given by what you have said that the Oregon Electric hasn't made a determined effort to get the freight business. Will you state whether or not consideration has been given constantly of the methods or means by

which the Oregon Electric might get into the lumber producing sections of the Willamette Valley?

A. I think the Oregon Electric has more projected lines on paper than any railroad in the world in order to enable it to participate in the lumber traffic of western Oregon. It has been a constant study during all of these years whether it would be worth while to spend additional money to try to reach more sources of traffic. The Booth-Kelly mill, near Eugene, is an example.

Many times we have adopted plans in the hopes of getting more of the traffic. (3106.)

I do not think that any other railroad with any different ownership in the Willamette Valley in the situation of the Oregon Electric could have done any better during those years in this effort to get more of the traffic.

Q. Directing your attention for a moment to the proposed extension of the Oregon Electric from Albany eastward into the timber, is it expected that that road with that extension will originate a lumber traffic, or will it haul logs into the mills at Portland and at tidewater?

A. Well, it is hoped that it will originate a substantial volume of lumber traffic but it is also expected that there will be a
1691 large tonnage of logs in their natural form offered to it, if it is permitted to build this extension, for transportation to the Columbia River markets.

It is true that the larger mills on tidewater are reaching farther all the time into the timber for their logs and it comes about naturally by reason of the timber that lies closer to these main waterways being cut off. As time goes on they will have to go farther and farther into the interior for their logs. I think an average length of haul on logs from this extension into Portland will be about 125 miles. (3107.)

Recross-examination:

The Oregon Electric is situation between two parallel lines of the Southern Pacific between here and Eugene. We have no branch lines here whatever extended between those two parallel lines of the Southern Pacific into the timber or into any territory not served by the Southern Pacific. Admittedly it is disadvantageously located and has something to do with the fact that we have not developed substantial freight traffic.

Q. Well, don't you think the showing would have been much better if you had extended some of these branch lines that you are now considering into the timber a few years ago?

A. No; I don't think that that could occur, Mr. Ellis in advance of the demand for logs from greater distances than which they are now being hauled in order to supply these tidewater mills.

Mills off of our lines (3108) have made efforts to get our service only in times of emergency, when sufficient cars might not have happened to have been available.

Q. And at times when the market on the northern lines was calling for lumber from those regions?

1692 A. Well, I think it is an unusual situation where the demand on the northern lines in the markets reached by those lines would be appreciably more attractive than the markets, we will say, on the Union Pacific.

Q. But how about the markets of the Southern Pacific? The Oregon Electric doesn't compete with the Union Pacific in the Willamette Valley.

A. No; but I am speaking about the northern lines, the Great Northern, Northern Pacific, and the Burlington, as contrasted with the Southern Pacific-Union Pacific route through Portland, or through Ogden, for that matter.

I do not solicit traffic for the Burlington. They have their individual representation here in the northwest, in all of the important traffic producing centers; and the Spokane, Portland & Seattle has its independent organization, similarly.

Mr. ELLIS. Is it not true that the Oregon Electric has been able to get traffic from the Southern Pacific by reason of its car supply at times?

A. I recall cases of that kind, Mr. Ellis. It seems to me it goes back to 1915, '16, and '17, prior to Federal control, where we were called upon to provide cars, or the shipper found it advantageous to assume some additional expense himself in order to have access to our car supply.

1693 I don't know of any case where that condition has existed within the past four years.

I can't answer your question as to whether a proposed extension to Silver Lake to the Oregon-California & Eastern is under construction. (3110.) Mr. Dey said there were 12 miles under construction or about to be constructed.

Mr. HART. That is on the line toward Lakeview, Mr. Ellis, and not the line towards Silver Lake. Up Sprague River to Bly.

Further redirect examination:

The Oregon Electric does reach the principal cities of the Willamette Valley, Salem, Albany, Corvallis, Eugene, Hillsboro, Forest Grove, and Woodburn.

The Oregon Electric has recently applied to the Interstate Commerce Commission for permission to abandon its branch to Woodburn; its two-mile branch from West Woodburn to Woodburn, because of lack of any traffic to be secured. (3111.) Referring to the statement of the demand made by the shippers in the Willamette Valley to reach our track and cars in 1915, 1916, and 1917, that was prior to the time that the Portland gateway was opened over the Great Northern and Northern Pacific. But since 1917, when those rates were put into effect, the traffic originating on the Southern Pacific lines can move through the Portland gateway to the territories thus served by the Great Northern and Northern Pacific.

H. A. GILLIS was thereupon produced as a witness on behalf of defendants and, having first been duly sworn, testified as follows:

Direct examination:

I live in Portland and am traffic manager for the Western Pine Manufacturers' Association. I have held that position since October, 1927. (3112.)

1694 Prior to October, 1927, I was assistant traffic manager of the Shevlin-Hixon Company at Bend, Oregon. Shevlin-Hixon and Brooks-Scanlon Company both operate large pine mills at Bend. They are members of the Western Pine Manufacturers' Association.

By virtue of my present work and my experience with the Shevlin-Hixon Company, I am thoroughly acquainted with the transportation problems affecting the movement of pine lumber east.

I should say that a difference of 200 miles or thereabouts between two railroad routes from Bend, say, to Chicago or points 1,500 or 2,000 miles distant would make no difference at all.

The Western Pine Manufacturers' Association is a voluntary association of pine producers who are located in the (3113) eastern sections of Oregon, Washington, throughout Idaho and Montana. There are about 35 mills with a total production of about two billion five hundred million. Their product is marketed in transcontinental territory, principally. They are interior mills—located east of the Cascade range of mountains. Their products move by rail.

Q. Now, then, in routing shipments from Bend, and advantages between the Union Pacific system on *on* the one hand, and the Great Northern or Northern Pacific on the other, what do you say as to whether or not a difference of 200 miles between the two routes would affect a choice?

A. Well, your routes and time in transit would make no difference at all.

Q. The fact that one route might be 200 miles longer than the (3114) other to a given destination would or would not affect the choice of the shipper in routing his shipments?

A. No; in routing lumber as much as a week would hardly affect it.

1695 Exam. ROGERS. Take on lumber shipments originating over, say at Bend, and going to some point east of the Mississippi River, say St. Louis or Chicago, how much difference would there have to be between the two routes in order that one might be said to be an unreasonably long route?

A. I had never given that much thought. In shipping lumber service isn't a decided factor, but a lot would depend on the class of material and who bought it. If they wanted it there in a hurry you might consider distance. A matter of time in transit would be a decided factor there. At the present time there are none of the routes that are taking much more time than the other.

In moving lumber, if one route took two days longer than the other I would not say that route was unreasonably long as compared with the other. I wouldn't think that three days would be. (3115.)

Q. (By Mr. HART.) Mr. Gillis, do you know whether or not the service now rendered the Shevlin-Hixon Company and Brooks-Scanlon by the railroads at Bend, the Union Pacific system lines and the Northern Pacific and Great Northern through the Oregon Trunk, is or is not reasonably satisfactory, or whether or not those lumber shippers feel the need of additional and shorter transportation facilities to the East?

A. Well, they are very well satisfied with the present service. There are only two mills operating over there.

Cross-examination:

The two large mills at Bend are served by the Oregon Trunk and the Oregon-Washington Railroad & Navigation Company. Southbound they are served by the Great Northern.

1696 At present and during the past, the business of those two Bend mills east has been divided between the Union Pacific and the Northern lines. (3116.) It was usually divided 60 per cent Oregon Trunk and 40 per cent Oregon-Washington Railroad & Navigation Company. That was because the Oregon Trunk was owned jointly by the Great Northern and Northern Pacific—that would divide the tonnage upon a more equitable basis between the three trunk carriers.

I understand if the cross-State line from Crane to Crescent Lake were built, that would intersect the Great Northern's line from Bend back to Chemult at a point a short distance south of Bend.

Q. Now, if that cross-State line were built by the Union Pacific system lines, or by the Union Pacific system in conjunction with other lines, would there be any reason you could see why, if the cross-State line afforded a somewhat shorter and less expensive route to the east than the Union Pacific's line down the Deschutes Canyon to Sherman and then taking the Columbia River route over the Blue Mountains, a substantial part of that 40 per cent of the eastern shipments of the Bend mills that the Union Pacific system lines have gotten in the past wouldn't be sent down to a connection with the cross-State line and thence east via Crane and the Union Pacific system lines? (3117.)

A. In other words, a choice of routes. Well, I don't know how they would move it, but it would seem to me their investment would be there just the same up in the canyon, the Deschutes Canyon, and it would be immaterial how they would move it out.

1697 Q. However, as to the 40 per cent of the business of the pine mills that the Union Pacific has gotten in the past, with the construction of this cross-State line that lumber, or 40 per cent, would have two possible routes to eastern markets, one through Sherman and the Columbia River route over the Blue Mountains,

one down to the cross-State line junction and then east through Crane?

A. Yes.

I would expect with the construction of that line there would be an appreciable part of that 40 per cent of production of the two Bend mills that would come down to the cross-State line and go east that way. It would not make any difference which way the Oregon-Washington Railroad & Navigation Company moved it. They would go through the same junction. As I understand it, this Crane line comes out at Ontario Junction east over there—all of this traffic, all the lumber sold moves (3118) through Ontario Junction. It is just the question of selecting your route at the point of origin, that is, the movement from there. (3119.)

As traffic manager of the Western Pine Manufacturers' Association, I have nothing to do with the routing of shipments of lumber mills. I could recommend routings, if for some reason they were being abused, I suppose. I am never asked to recommend routings by lumber mills.

When I was traffic manager of Shelvin-Hixon Company, I specified routing of its shipments east in the bills of lading. As to what considerations determined the routing I would specify for the shipments east, our principal consideration was just the division of traffic. If there were 20 cars shipped that day, we gave 60 per cent or 12 cars to the Oregon Trunk and split those evenly between the Great Northern and Northern Pacific, and the balance would go by the O.-W. R. & N.

1698 Q. Now, did the destination or destinations of these shipments have anything to do with, or any influence on, the routing which you specify?

A. Well, you would have to tell me what destination you referred to. For instance, east of Chicago, Chicago and east, why it would not make any difference at all which line handled it. To a point like Minneapolis, you would naturally give it either to the Northern Pacific or Great Northern, depending on what delivery they asked for. If the destination was a point on the Union Pacific Railroad or the Oregon Short Line Railroad, or a connection of those lines east of Missouri River and west of Chicago, I would route it to Union Pacific destinations. If it were to an eastern connection of the Union Pacific; suppose it was to a point on the Chicago & North Western between Council Bluffs and Chicago, I would not pay much attention to it. The rates are the same via all routes, and if the car we ordered was the right size, and so forth, we wouldn't pay much attention to it.

I had nothing to do with the selling of lumber for the Shelvin-Hixon Company.

As to whether we received instructions with respect to time of delivery required on (3121) certain shipments, occasionally an order would come in specifying a certain route, but I presume as a matter of time or preference of some kind.

I was with the Shelvin-Hixon Company from April, 1918, until the end of September, 1927.

Q. Now, in that nine-year period do you recall any instances of instructions from the sales department to you calling for the insertion of a routing in a bill of lading that would insure the quickest possible movement to a destination where the sales department had sold a car of lumber?

1699 A. There might have been some instances like that.

The mills in the Western Pine Manufacturers' Association have mixed woods, the same as they have in other districts. But it is principally pine timber. The members of the association are cutting the same species of woods, generally speaking; (3122) also they are producing the same varieties and items and grades of lumber and lumber products.

There are sawmills in the pine district that don't belong to the Western Pine Manufacturers' Association. All of these mills, those who are members and those who are not, that are operating in the pine district compete with each other in the sale and shipment of lumber and pine lumber products in eastern markets. This competition has been very keen since the reconstruction period shortly after the war.

I would not say that abilities to make deliveries of lumber as specified in point of time by purchasers was an important element in the ability of a particular mill to meet successfully competition of other sawmills in the pine territory. (3123.)

The orders received by Shelvin-Hixon Company or by the Western Pine mills don't, as a rule, specify a time within which they should be delivered. They will usually specify a time they should be shipped and take it for granted it will be there on a certain specified day after that.

Q. Another witness here, Mr. Gillis, in this case, from the fir producing region in western Oregon, testified that in recent years quite a change had taken place in the marketing of fir lumber and

1700 fir lumber products; that it used to be that orders would be received which could be filled in sixty or ninety days, or even six months, and perhaps for a considerable number of cars at a time, but nowadays often orders were received for a car with specified delivery within 30 days that might be made up of a whole series of special items that would have to be cut after the order was received. Do you know whether conditions are similar in the pine industry at present among the mills of your association to those described by the witness I have just mentioned? (3124.)

A. Yes; I would say they were the same, with one exception; that is, that a pine mill carries these various items in stock. All pine is shipped dry.

Q. Now you mentioned a saving in distance of 200 miles out of a total haul of 1,800 miles of lumber you thought was unimportant. How much would you estimate in time a saving in distance of 200 miles would represent?

A. Well, continuous running?

Q. Well, as cars of lumber or pine lumber are handled east from Bend and from the other mills in your association. You must know in a general way, Mr. Gillis, about how fast they move. Now I wish you would translate that saving of 200 miles in distance into an equivalent of days or hours, if you can, as nearly as you can.

A. That would be pretty hard to do. For instance, it takes from Bend about ten days to get back to either the Twin Cities or Omaha, and about 12 days to Chicago. Now here is a solution there. It is approximately 400 miles between Minneapolis and Chicago, and the service there is two days, so is might mean a difference of 24 hours.

Q. Now as the total length of haul decreased wouldn't a saving of 200 miles in distance become more and more important?

You (3125) said out of a total haul of 1,800 miles you didn't
1701 think 200 miles saved in distance would amount to anything?

A. No.

Q. Now as the haul diminished, was less than 1,800 miles, and become less and less wouldn't this saving of 200 miles in distance become relatively more and more important?

A. Well, I suppose you could draw that into a point where it would.

Q. Well, at what point do you think, or what total length of haul do you think you would have to have where a saving in distance of 200 miles would be of real importance to a lumber shipper or consignee?

A. Why, I think it would have to be some immediate neighborhood. A man might call up on the telephone and want some lumber the next day, but if it did not arrive there for two days he would know there was something radically wrong. But practically all the lumber is sold to transcontinental territory, and I suppose you can find routes that we are using right now that might be 200 miles longer than the other. But I don't know that the time makes any difference over them, or whether there is any difference in time.

We have had the experience, especially during war time, of tracing cars and attempting to ascertain reasons for delayed movement to destination. (3126.) We very seldom have a case of that kind any more. I will qualify myself there. The man most interested in the service is the consignee, and he usually does the tracing, because he is located back east somewhere and it is easier for him to get in touch with the particular carriers that are shown in the bill of lading and obtain that information. He very seldom wires the mill.

1702 Some complaints about time in transit or delayed delivery have come to my attention as traffic manager.

Q. Mr. Gillis, as between two routes, even to Chicago or points east of Chicago, where there was nothing to choose between the two routes, except by one a saving of 200 miles in distance, other things being equal, and you having no reason to want to divide up the

traffic between competing railroads, which of the two routes, if you were a traffic manager or a lumber manufacturer would you use?

A. Well, there are two many things involved to say. Over one particular road you may be asking for some concession or other in the way of a rate matter, if you are referring to just one (3127) particular car. If it is the volume you think of, I don't think the question is altogether clear.

Q. Suppose the Oregon Trunk did not serve Bend, but the Union Pacific did, and the Union Pacific had this route through Sherman and then up the Columbia River and over the Blue Mountains and east through Huntington; suppose this cross-State line also were built and you could come down from Bend to the cross-State line and route east over the Union Pacific that way, and your route through Crane was 200 miles less than your route through Sherman, and whichever way it moved it would move Union Pacific. Now as traffic manager of one of the Bend mills, under such circumstances, how would you route your company's traffic all points east, Chicago, everywhere?

A. I think it would be divided just the way it was before. If the Oregon Trunk was there.

Q. No; I said if the Oregon Trunk was not there. Suppose you just had two Union Pacific alternative routes, and one was
1703 200 miles (3128) shorter than the other——

A. I don't think we would route it at all. That would be left up to the carrier that served the territory.

With respect to demand for lumber in eastern markets on short delivery, the pine and fir industry are substantially the same except we carry dried pine in our yard.

Q. Am I to understand from that answer that the buyers of pine lumber in the East are carrying smaller stocks on hand than they were, and are relying on the yards or mills in the West to supply their demands as they need them?

A. Yes. They are doing business on a hand to mouth basis now. In other words, the mill carries the stock. That affects the pine as well as the fir industry. The mills I represent are east of the Cascades. The presumption is that it carries a demand for quicker service between your mill and the consignee.

The practical effect is as follows: There was a time before the establishment of the regional advisory board, especially, when the service to the eastern markets was very poor. In other words, I have seen cars tied up in yards out here as high as forty days without moving, and since the service has been corrected and you can depend on it the retailer takes advantage of that point and does not carry the stock on hand now that he used to. Formerly a man would come in to buy lumber from him and he had the stock there, where now he tells him that he can wait a week or so and he will have it for him, and ordinarily a man building a house, a matter of a week or two of course dosen't make a great deal of difference.

Exam. ROGERS. Well, what we are getting at is, whether this policy or practice on the part of these lumber dealers to carry less
1704 stock on hand has resulted in a situation where a matter of one or two days less time in transit is a matter of considerable importance. Ordinarily how much difference in time would you think it would have to be to make a difference to these lumber dealers, which you say are dealing (3130) on a hand to mouth basis?

A. I would say possibly a week.

Redirect examination:

It is a matter of dependability of service rather than a shorter time. A retailer now knows what he can depend upon in the matter of transportation service from the mill to his yard. And as a result of that he does not carry the stock that he formally had to when he never knew how long it would take to get his lumber moved from the mill to his retail yard. Under the present conditions the retailer knows what he can depend upon, and it does not make any difference whether his transportation is to be a week or ten days, as long as he knows what it is to be. There was a time when if he got it under two months he thought he was getting good service. Now he expects it under a month. This came about after the institution of the regional advisory board; about three years. They established them back East before they did out here. (3131.)

As to the capacity of the mills: The Shevlin mill will produce 750,000 a day and the Brooks mill about 700,000. That is two 8-hour shifts. These mills at Bend compete directly with pine mills in Idaho. The Idaho mills are two to three days closer to the markets. Idaho mills do not have the same rates we do. Bend is what they term naught-eight territory. It is intermediate territory between the Spokane group and coast group. Idaho has a lesser
1705 rate. Idaho takes the same rate as Spokane. Those rates were fixed by the commission in the Potlatch case. (3132.)

H. E. GODWIN was thereupon produced as a witness on behalf of defendants, and, having been duly sworn, testified as follows:

Direct examination:

I am general freight agent of the Oregon Short Line Railroad Company with headquarters at Salt Lake City. The railroad headquarters are also at Salt Lake City.

I have been with the Oregon Short Line since 1897, 22 years of which period was in the traffic department, nine years as assistant general freight (3133) agent and four years as general freight agent.

The Oregon Short Line Railroad Company is one of the several units of the so-called Union Pacific Railroad system. This Oregon Shore Line Railroad Company operates some 2,540 miles of railroad. It owns all of this mileage except some 157 miles owned by the Oregon-Washington Railroad & Navigation Company, extending from a connection with its main line about a mile and a half east of Ontario in Malheur County, Oregon, in a southwesterly direc-

tion for 157 miles to Burns, the county seat of Harney County, Oregon, and except a short piece of mileage extending from Vale in a northwesterly direction to Brogan, a distance of approximately 23.74 miles.

Until December, 1924, this branch line terminated at Crane in Harney County, but it was extended from Crane to Burns, a distance of approximately 30 miles, in 1924, and opened for
1706 operation in the month of December of that year. The extension to Burns from Crane was made upon the confident assurance that a sawmill operation was to be established at Burns for the manufacture of pine timber to be cut and transported in the log from the Malheur National Forest north of Burns. (3134.)

To this end a railroad line was graded by a corporation known as the Malheur Railroad Company from Burns in Harney County north to Seneca in Grant County, Oregon, the terminus being in the heart of the operation contemplated by the agreement between Fred Herrick and the United States Forestry Department, by which agreement Mr. Herrick was purchasing from the Government his timber supply for the operation of his proposed mill.

The contracted stumpage between Mr. Herrick and the Government amounted to about 890,000,000 feet and the contemplated cut was to be from 50,000,000 to 60,000,000 feet per year. The Malheur Railroad Company was a Herrick enterprise.

As a part of the plan contemplated by his contract with the Government Mr. Herrick caused to be organized the Fred Herrick Lumber Company, with its principal office and place of business at Burns in Harney County. By reason of his failure to complete and place in operation the mill and the railroad, Mr. Herrick's stumpage contract with the Government was canceled by the Forestry Department in 1927, and none of the timber has been cut nor can it be cut or manufactured into lumber by Mr. Herrick or his organization.

The only other mileage operated by the Oregon Short Line that is not owned by it consists of a branch line owned by the Oregon-Washington Railroad & Navigation Company extending from Blakes Junction in Baker County, Oregon, about a mile and a (3135)
1707 half east of Huntington, down the west bank of the Snake River for a distance of approximately 56 miles to Homestead.

The western terminus of the Oregon Short Line Railroad Company is at Huntington, Oregon, where it connects with the Oregon-Washington Railroad & Navigation Company's main line track extending westerly to Portland, Oregon.

The eastern terminus of the Oregon Short Line Railroad Company is at Granger, Wyoming, where it connects with the tracks of the Union Pacific Railroad Company.

The Oregon Short Line also has a main-line track extending from Salt Lake City, Utah, in a northerly direction to a connection with the foregoing east and west main line at McCammon, Idaho. From

McCammon it operates over the east and west main-line track to Pocatello, Idaho, and from there it proceeds north through Idaho Falls to Butte, Mont. This main-line trackage amounts in the aggregate to 1,012 miles.

The remainder of the system trackage of the Oregon Short Line Railroad Company, amounting to a total of 1,527 and a fraction miles, consists of branch-line mileage. The location of this trackage, comprising the system of the Oregon Short Line Railroad Company and the territory served thereby is reflected by a map now submitted as an exhibit. (3136.)

(The map referred to was received in evidence marked "Defendants' Exhibit No. 73, Witness Godwin.")

The home office of the Oregon Short Line Railroad Company is at Salt Lake City, Utah, where its general offices are located and from which point its operations are managed and conducted. At Salt Lake City, Utah, it connects with the railroad of the Los Angeles & Salt Lake Railroad Company, the main line of which extends from Salt Lake City to Los Angeles.

1708 The Los Angeles & Salt Lake Railroad Company is also another unit of the so-called Union Pacific system, and its general offices are at Los Angeles, Calif., from which point its operations are conducted.

The western terminus of the Union Pacific Railroad Company is at Ogden, Utah, which point is reached by its main line extending west from Omaha through Granger, Wyo., to Ogden.

During the past 25 years the semiarid lands of the southern Idaho country served by the trackage of the Oregon Short Line Railroad Company have been gradually and progressively reclaimed by irrigation made possible by the available (3137) waters of Snake River and its tributaries. As this reclamation work has progressed the Oregon Short Line has extended its branch-line construction into these areas, and the extensive branch-line trackage in southern Idaho has resulted as a consequence to efficiently serve the reclaimed territory and the areas tributary thereto.

The irrigated areas in question, to the extent same obtain west of Pocatello, Idaho, appear colored in green upon the map already introduced in evidence as Exhibit 13, and the total acreage of same amounts to approximately 1,400,000 acres.

Interspersed in the already irrigated areas referred to are various additional areas proposed to be reclaimed, and in part authorized and provided for, the total acreage of which amounts in round figures to about 194,000 acres. These prospective areas are outlined in yellow upon Exhibit No. 13. This area of reclaimed irrigated lands and lands considered available for reclamation includes the areas in Malheur County, in Oregon, as well as the southern Idaho areas.

1709 The tonnage originating on the Oregon Short Line between Huntington and Pocatello on the main line and on the va-

rious branch lines built to serve this territory is produced in the main from these extensive irrigated areas. Without them, the large expenditures made by the Oregon Short Line in improving its facilities, and particularly in the construction of its branch lines between Pocatello on the east and Huntington on the (3138) west, would not have been justified.

To the end that these projects might succeed, the Oregon Short Line Railroad has consistently interested itself in the problems of the producer in a much broader way than the mere furnishing of transportation.

It maintains an agricultural department to advise with the settlers in the matter of crop production and marketing.

It has conducted dairy, poultry, seed, and potato demonstration trains and, in cooperation with Idaho University and the experts of the agricultural extension department of that State, it has advised and encouraged development of the dairy industry and diversified farming in general.

To the extent that it might consistently do so, it has made favorable rates to prospective consuming markets for the products of these lands and, in connection with the development of the dairy industry and for the benefit of the poultry and egg producer, has established concentration rates and loading-in-transit rates from the several producing districts to enable the shipping of these products in carloads lots.

The result has been successful and gratifying for both the producer and the railroad company. This is fairly well
1710 illustrated by the accomplishment of the year 1927, when the products from these lands were successfully marketed in all parts of the country, some of them reaching destinations in as many as 45 States. In this connection, effort has been made to (3139) obtain advantageous markets on the coast for these producers, and these efforts have been progressively successful in the Los Angeles market in particular.

The people of southwestern Idaho conceived the possibility of establishing more effective trade relations with central and northern California, and that with a shorter route to that market the problem of excessive production might be effectively solved. To this end, and in response to a very earnest appeal by these Idaho people, the Oregon Short Line Railroad Company constructed an extension of its line that formerly terminated at Rogerson, Idaho, on to Wells, Nevada, where a connection was made with the line of the Southern Pacific Company's main east and west line to San Francisco. This construction was for a distance of 94.7 miles. The extension was opened for operation February 15, 1926.

The western Pacific is also effecting a connection with this Rogerson-Wells line at Wells, Nevada.

The investment in this extension from Rogerson to Wells amounted as of December 31, 1927, to $3,434,322.78.

To date this cut-off has not been extensively used by the shippers from this southwestern territory, and the producers in this territory have as yet been unable to develop extensive markets for the consumption of their product in central and northern California. This condition is due in my opinion in no small degree to the com-
1711 petition encountered by these (3140) southwestern Idaho producers in San Francisco Bay points from the extensive and productive valleys of central and northern California, and from the producers of similar products grown and shipped in an extensive way from Oregon and Washington. In Oregon and in Washington there are extensive areas producing similar products that are less distant by rail, and from which the producers also enjoy the benefit of ocean service from Portland and Puget Sound ports to San Francisco.

Ogden, Utah, is the center of a very extensive, fertile and productive territory, consisting of the Malad and Cache Valleys, which extend for approximately 100 miles to the north, and the Salt Lake Valley extending some 100 miles or more to the south to Provo and Payson, Utah, the entire area probably aggregating more than 1,000 square miles. They produce substantially the same diversified crops, poultry and dairy products as does southern Idaho.

Ogden, a city of approximately 35,000 people, is an important trade center, with extensive facilities for the handling and marketing of livestock and for the milling of flour and by-products. It is 782 miles via the main line of the Central Pacific operated by the Southern Pacific to San Francisco (3141) and 818 miles via the Oregon Short Line and Los Angeles & Salt Lake Railroads to Los Angeles. The shipments of the products of these valleys tributary to Ogden enjoy wide distribution, as is illustrated later in my statement with respect to the products of southern Idaho, and the percentage of its products finding market and disposition in Los Angeles is at least four and probably five times as great to Los Angeles as to central and northern California points, the rates being the same from Ogden to Los Angeles as from Ogden to San Francisco.

1712 Under existing conditions the equidistant point on the Oregon Short Line to San Francisco via Twin Falls and Wells, Nevada, on the one hand, and via Crescent Lake on the proposed route, on the other, is between Cleft and Sebree near Mountain Home. The distances via this existing route through Wells and the proposed route via Crescent Lake to San Francisco from stations Mountain Home and west are reflected by Exhibit No. 74.

(The statement was received in evidence, marked "Defendants' Exhibit No. 74, Witness Godwin.") (3142.)

Q. (By Mr. SPENCER.) You gave the equidistant point, Mr. Godwin, just west of Mountain Home, on this Exhibit No. 74.

A. This exhibit also shows that the distance from Mountain Home to San Francisco is 184.6 miles shorter via the Wells gateway than via Ogden.

I am submitting a statement showing number of tons, by commodities, of carload freight forwarded from all stations on the Oregon Short Line Railroad west of Mountain Home, Idaho, during the year 1923, to destinations in northern California, southern California, Oregon, and Washington. This was Exhibit 73 for the year 1923 in the previous case. (3143.)

(The statement was received in evidence, marked "Defendants' Exhibit No. 75, Witness Godwin.")

(Corresponding exhibit for the years 1924, 1925, and 1926 was received in evidence marked "Defendants' Exhibit No. 76, Witness Godwin.")

The total tons, 1923, California points north of Santa Barbara and Mojave (3144) are 1,567 tons; south of Santa Barbara and Mojave, 8,415 tons. To Oregon, 52,271 tons; and to Washington, 19,523 tons.

For 1924 the traffic from the same originating territory was distributed as follows:

West of Mountain Home, California, north of Santa Barbara and Mojave, 1,578 tons; to California south of San Barbara and
1713 Mojave, 11,946 tons; to Oregon, 53,141 tons, and to Washington, 20,156 tons.

For the year 1925, to California points north of Santa Barbara and Mojave, 3,496 tons; to California points south of Santa Barbara and Mojave, 18,818 tons; to Oregon, 35,392 tons; and to Washington, 14,382 tons.

In 1926 to California ports north of Santa Barbara and Mojave, 2,686 tons; to California points south of Santa Barbara and Mojave, 17,560 tons; to Oregon, 62,519 tons; and to Washington, 16,017 tons. The line drawn south of Santa Barbara and Mojave and north of Santa Barbara and Mojave is the usual division of the California territory. It conforms to the rate adjustments generally.

An analysis of the distribution of substantially all of the agricultural products and fruit and dairy products from the southern Idaho territory for the year 1927 to destinations, by States, was presented.

(Said statement was received in evidence, marked "Defendants' Exhibit No. 77, Witness Godwin.") (3146.)

Exhibit No. 77 consists of a summary sheet and two detail sheets attached and shows the number of cars of the commodities shown from all Oregon Short Line points in Idaho to territorial destinations specified during the calendar year 1927.

Attention is also called to the fact that of all California shipments in the year 1927 from Southern Idaho 2,224 cars moved to points in central and northern California, and that of this number 381 moved via Wells and 1,843 via Ogden and Salt Lake, the movement via Salt Lake being permitted by reason of through rates obtaining at that junction with the Western Pacific.

On the other hand, the shipments from this same originating territory to Los Angeles and surrounding territory of south-

1714 ern California amounted to 5,296 cars. An analysis of this tonnage and its movement demonstrates the preference by the shipper for main-line service, which obviously affords better service and facilities, than over a line with light traffic where limited train service and facilities necessarily obtain.

There is one feature that has not been mentioned that is an advantage and an inducement for this routing. Ogden and Salt Lake City are important trading centers and some of the (3147) commodities involved might well be routed through these commercial centers, with the object of obtaining the market advantages by sale of products in Utah markets or taking advantage of diversion privileges permitting them to divert traffic to eastern markets or to the markets in southern and northern California. This routing is particularly desirable in connection with livestock, grain, and grain products.

Of course, this last exhibit includes all southern Idaho territory served by the Oregon Short Line Railroad and the shipments from points east of Mountain Home and north of Pocatello, and from points extending as far east as the Wyoming border, amounting in the aggregate to more than the total volume of the shipments from west of Mountain Home. This is particularly true with respect to wheat, potatoes, and livestock.

The so-called Oregon eastern branch, owned by the Oregon-Washington Railroad & Navigation Company and terminating at Burns, but operated by the Oregon Short Line Railroad Company, has been operated from Ontario to Crane by the Oregon Short Line Railroad Company since 1916 and the operation extended to Burns since December, 1924. The total shipments from this branch to Oregon, Washington, and California destinations for the years 1924, 1925, and 1926 were as follows, the volume being stated in tons:

1715 In 1924 to California points north of Santa Barbara and Mojave 130 tons; to California points south of Santa Barbara and Mojave 1,242 tons; to Oregon destinations, 10,955 tons; and to Washington destinations 1,858 tons.

In 1925 to California destinations north of Santa Barbara and Mojave 660 tons; to California points south of Santa Barbara and Mojave, 501 tons; to Oregon destinations 5,450 tons; and to Washington destinations 1,038 tons.

(The statement giving above information was received in evidence market "Defendants' Exhibit No. 78, Witness Godwin.")

As to special conditions that may have induced this more substantial movement in the year 1925: There was a drouth in the territory (3149) in 1924 that required that a number of cattle be shipped out of the territory because of lack of feed to take proper care of them. The drouth was in the Burns territory and Crane and all along the Oregon eastern branch from Ontario in there. It was a very severe drouth and several thousand head of cattle were shipped out during the latter part of 1924 and there was some heavy movement early in 1925.

In 1926 to California points north of Santa Barbara and Mojave, no shipments; to California points south of Santa Barbara and Mojave 163 tons; to Oregon points 10,110 tons; and to Washington points 1,948 tons.

I have a similar statement for 1923, presented and filed as an exhibit in the previous case. (3150.)

(Said statement was received in evidence, marked "Defendants' Exhibit No. 79, Witness Godwin.")

As reflected by these exhibits, livestock and the products of agriculture comprise substantially all the shipments off of this branch.

1716 The extension from Crane into Burns in 1924 was made in the hope that a lumber operation might be developed at Burns, but as yet it has not materialized. The extension runs (3151) for about 30 miles over a level country involving no expensive construction, and it extends for the most part through a valley devoted principally up to the present time to the raising of hay by flood waters from the Silvies River drainage, which empties into Malheur Lake. It was conceived that if a sawmill operation could be brought about near Burns, it might expand so as to afford substantial additional traffic for this impoverished line.

I have a statement showing the shipments from Harney County, from these stations, between Crane and Burns.

(The statement was received in evidence marked "Defendants' Exhibit No. 80, Witness Godwin.")

The exhibit shows the movements for the years 1923, 1924, 1925, 1926, and 1927. (3152.)

It will be noted that since the branch was extended into Burns the total shipments from Harney County averaged less than two cars per day.

It has been suggested that livestock would move to the Pacific coast via the cross-State line in preference to the existing route to Portland. The development of the livestock market at Portland, as a market for the receipt and distribution of livestock for the Pacific northwest, has been a matter of growth over a long period of years. Formerly the volume was not sufficient to sustain the movement of stock speicals, and in those years the livestock

1717 was moved in expedited freight trains. Later, with the development of the business and increase in its volume, the livestock from southern Idaho points was brought into Huntington, Oreg., and fed and watered, and a live stock special operated via the O.-W. R. & N. to Portland, the same being sustained by increased shipments obtained en route from Huntington to Portland. Later and with the development of the business in the Puget Sound markets, the operation of the livestock special was extended east to Glenns Ferry, Idaho.

From this point a livestock special is operated through, leaving Glenns Ferry at 7.00 a. m., and Nampa at noon on Friday of each week. It picks up all available shipments along the main line of the Oregon Short Line to and including Huntington, and from

there proceeds into Portland without picking up any additional cars of stock, and arrives at Portland (3153) on a through movement without unloading for feed and water en route.

The statement was made that by reason of embargo obtaining against Idaho hay, it was necessary to stop at Huntington, clean and rebed the cars, but the fact is that hay or straw is not and has not been used for bedding in stock cars, but they are uniformily sanded before the stock is loaded and go through to Portland without inspection or unloading. This livestock special arrives at north Portland stockyards Saturday night at 10.00 p. m.

This service is supplemented by another livestock special which leaves Huntington, Oreg., every Saturday morning at about 8.00 a. m. This special takes all shipments from southern Idaho points brought in from branch lines that were not available or ready for movement on the livestock special leaving Glenns Ferry, and it also picks up all livestock en route west of Huntington This Huntington special comes through to Portland without stopping for feed or rest, and arrives at north Portland yards Sunday about noon.

1718 While these shipments into north Portland include some shipments having Tacoma and Seattle for ultimate destinations, there is one substantial buyer at Seattle, Frye & Company, who consistently unloads his shipments at The Dalles, Oreg., for feed, water, and rest, and does not unload at the north Portland yards, although he buys there extensively. These shipments for Frye & Company, as well as shipments from (3154) north Portland, leave Portland on Sunday night and are unloaded at Tacoma and Seattle the following morning.

From the foregoing it is not to be understood that there has been a large increase in the shipments of livestock into the Portland and Puget Sound markets from eastern Oregon and southern Idaho during recent years, but the business has been such as to justify, in our opinion, the increased service as above outlined. These shipments from eastern Oregon and southern Idaho comprise about 70 per cent of all the livestock transported into north Portland yards.

The main line of the Oregon Short Line and of the Oregon-Washington Railroad & Navigation Company is of a high type of construction, well maintained, with long passing tracks, block signal protection and ample facilities for efficient operations. Such a railroad, with the facilities afforded permits infinitely better service than could be possible over a new line through an undeveloped and unproductive country, not reaching the ultimate terminus but requiring an interchange to another carrier for handling on to destination.

The distance to Portland and to Puget Sound from any point on the Oregon Short Line is more than 100 miles shorter via the present route than via the proposed route through Crescent Lake, the distance from Ontario to Portland via the present route being 432 miles and via the proposed route 535 miles. (3155.)

1719 Furthermore, if the shipments are to be divided and any substantial part of same from Ontario and east diverted to the cross-State line, the special service now afforded by these livestock trains could not be justified. This service has been afforded at the earnest request of the livestock shippers of southern Idaho, and it is inconceivable that they would move any substantial part of their shipments via the cross-State line in the face of inferior service that would necessarily result over both routes.

Practically all of the livestock from Caldwell is shipped through the yards operated by the witness, Smeed. An analysis of all of the shipments from that yard during the year 1927 follows: To Portland, cattle 146 cars, sheep none; to Tacoma, cattle 1 car, sheep 6; to Seattle, cattle 16 cars, sheep none; to Los Angeles, cattle 1, sheep none; to San Francisco, no shipments of either cattle or sheep; to eastern destinations, 6 cars of cattle, 22 of sheep.

The percentage of sheep and lambs moved to coast markets is comparatively small. The market is in the Eastern States, particularly in Colorado, Nebraska, Missouri, and Illinois. During the year 1927 the total shipments of livestock to the Eastern States was some 5,652 cars against a total of 4,198 cars to all points in the Pacific Coast States, the distribution to (3156) the Pacific Coast States from southern Idaho being to Oregon, 1,134 cars; to Washington, 964 cars; to Los Angeles territory, 1,545 cars; and to central and northern California, 555 cars.

1720 Eighty-seven cars of livestock moved to central and northern California via the Rogerson-Wells line in 1927, and it is hoped that the business through that gateway will increase, but it is to be noted that of the 555 cars moving to central and northern California 355 cars moved via Ogden, 110 cars via Salt Lake and the western Pacific, and two via Portland, notwithstanding the fact that from southern Idaho the distance to San Francisco is 184.6 miles shorter via the Rogerson-Wells line than via the route through Ogden.

If the use of the Rogerson-Wells line should become general and justify the expenditure, the distance could be materially shortened by the construction of 28 miles of new line between Tuttle on the north side branch and Buhl on the Twin Falls branch. Such construction would move the equidistant point to San Francisco from Cleft near Mountain Home to Nampa on the main line, and to Sonna, west of Boise, on the Boise main line. These points would be 885 and 891 miles, respectively, from San Francisco, thereby shortening the distance via the Rogerson-Wells line about 45 miles.

The controlling consideration for this movement was the better service and facilities available by main line operation. Not only does southern Idaho find its market for its sheep and lambs (3158) in the East and in Los Angeles, but central and northern California itself ships at certain seasons of the year a considerable volume of lambs to the eastern markets, but this is not true from the Los An-

geles district. Furthermore, central and northern California is an important market for both cattle and sheep, lambs and hogs from northern California, from Nevada, and from western Oregon.

I have been over the proposed central Oregon route and over the route from Rogerson to Wells, Nevada, and there is no compar-
1721 ison in my opinion as to the productive possibilities tributary to the respective lines. While the Rogerson-Wells line does not originate a large volume of traffic, it has a substantial mining operation in prospect at Contact, which was held out as a considerable tonnage prospect at the time the appeal was made for the construction of the line.

Furthermore, there is a large ranch extending along the Rogerson-Wells line for some 30 miles, irrigated by flooding process by waters from Shoshone Creek, Salmon River, and Thousand Springs Creek. These lands are stocked with some 1,500 head of horses, about 20,000 head of cattle, 32,000 head of sheep. There are other smaller ranches operated by the stockmen in the same district. Nothing of this kind is to be seen on the route traversed from Crane to Crescent Lake.

In case the projected line via Crescent Lake is built, there are no commodities I know now produced in western Idaho (3158) that would be produced in larger volume by reason of such construction, neither would it develop the production of additional commodities not now produced, for the reason that irrigated districts much closer to San Francisco have by no means reached the stage of development that has been reached in Idaho, which is not at all dependent upon the San Francisco market.

For illustration, figures taken from the Reclamation Records, a Government publication, of July 1922, page 158, substantially affecting the status of those districts at the present time, show that the Newlands, Nevada, project, distant from San Francisco 274 miles, is only 64 per cent developed; and the Klamath Falls, Oregon, project, 408 miles from San Francisco, is but 72 per cent developed. Both of these projects are natural resources of supply for San Francisco.

1722 In my opinion, no increased movement of manufactured articles from San Francisco would be developed over that now being received by established transportation routes, neither will it change the status of the San Francisco jobber. The Portland jobbers distribute merchandise quite extensively, also those in Baker City to a lesser degree, in competition with jobbers located at Boise, as far east as Boise and Nampa.

While there is more or less movement of coastwise and intercoastal tonnage through the port of Portland, this situation would not be disturbed by the construction of the proposed (3159) line through central Oregon, for the reason that the steamship rates are generally on a parity at all Pacific coast ports, and the traffic would naturally move through Portland, as the distance and volume of the rate for the rail haul would be less than through the port of San Francisco via Crescent Lake.

If it be assumed that the Crane-Crescent Lake line as constructed afforded a somewhat shorter route from the territory Mountain Home and west to San Francisco, I do not believe that an expeditious service could be justified. This is because of the extremely light tonnage, possibility of development along the new line resulting in low density of traffic and infrequent train service.

Conversely, by reason of the greater density of traffic via the established routes, the bulk of the business to San Francisco from the west end of the Oregon Short Line would move via those routes.

Local territory to be served by the proposed new line, because of the very sparse population, will not increase the jobbing of manufactured articles, etc., from Boise, Portland, or Baker.

Consideration should also be given to the fact that the Rogerson-Wells line has been completed, and it affords a shorter route
1723 from the Twin Falls district to San Francisco. This district is about the same in area and produces in very large volume the same commodities that are produced in the territory discussed west of Mountain Home. By the present route through Ogden to San Francisco from a point of 6 miles west of Mountain Home the distance is 1,112.5 miles. From this same point to San Francisco via the Rogerson-Wells cut-off the distance will be 927.9 miles, reflecting a reduction in mileage of 184.6 miles; and from this same initial point, 6 miles west of Mountain Home, via the suggested line through Cresent Lake, the distance to San Francisco is 927.9 miles.

The advantage of the Rogerson-Wells route is manifest because of the density of traffic and operating efficiencies that will attend the movement over the line through Wells to San Francisco.

The equidistant point referred to above involves a transportation service by either route of 927.9 miles.

The service over the suggested route through central Oregon via Crescent Lake will be over an inferior line, with infrequent service and light traffic.

The production from the territory in Idaho east of this equidistant point near Mountain Home amounts to more than 75 per cent of the total production of southern Idaho.

As to the location of these ten southwestern counties: The territory (3161) with respect to southwestern Idaho practically embraces those ten counties. Mountain Home, Elmore County, is the most easterly of the ten counties referred to by Witness Newton.

The production from the territory in Idaho east of this equidistant point near Mountain Home amounts to more than 75 per cent of the total production of southern Idaho, and this business, with the transportation service arranged to take care of it, must naturally attract and take with it a large per cent of the business to the west of the equidistant point, because of its volume and because of service.
1724 There is little distance involved in southern Idaho west of this equidistant point as compared with the entire total southern Idaho production, and the fragment that is left to be attracted to the suggested central Oregon Crescent Lake line is so

small that it would not be a substantial contributing resource to sustain the construction and operation of that suggested line.

While he central California markets are considered as potential for the products of southern Idaho, and they were a consideration in undertaking the construction of the Rogerson-Wells line, it is not yet apparent that these hoped-for (3162) markets will command a substantial part of the tonnage produced in the Twin Falls district.

Actual operation and experience has demonstrated that the production from this territory is distributed over large areas substantially more remote from the fields of production than is central California, but it is hoped that the central California market may afford an increased demand for the excess production now obtaining in this territory.

Public Utilities Commission of Idaho Exhibit No. 5, witness Newton, on page 4, showed total number of carload shipments forwarded from ten southwestern Idaho counties to all destinations. Detail of the shipments from these counties, 1927, is shown on pages 1 to 4 of Newton's Exhibit No. 6.

Total number of carload shipments forwarded from the ten southwestern Idaho counties for the year 1927, 14,582 cars from all of these ten counties to all destinations.

Ada County, in which Boise is located, total shipments 1,359.

1725 Elmore County, in which Mountain Home is located, 223 cars.

Owyhee County, in which is located Murphy, Idaho, McCoard, and Homedale, 926 cars. Murphy is terminus of the Murphy (3163) branch, from which 684 cars were moved to all destinations.

Canyon County of which Nampa and Caldwell are two principal shipping points, total shipments 4,949 cars.

Gem County, principal shipping point Emmett, Idaho, total 1,362 cars.

Valley County, total 795 cars, originated at points on the McCall branch, all of which is moved through Nampa.

Boise County, total 108 cars, also from points on the McCall branch, beyond Emmett, moving through Nampa.

It will be observed there were shipped to all points from these seven counties about 9,500 cars, leaving balance of approximately 5,000 cars originating in Payette, Washington, and Adams Counties.

It is impossible to determine from these exhibits how much of this business they contend might move via the cross-State line, but the Wells line is from Mountain Home, Elmore County, nineteen miles shorter to San Francisco than via the proposed cross-State line; the distance from Boise, Ada County, is 63 miles shorter via Crescent Lake; from Nampa 91 miles; and from Emmett 119 miles.

Traffic originating in other counties referred to is handled through Emmett and the saving in distance via the cross-State line from those points would be 119 miles, or an average shorter distance from the seven counties (3164) via Crescent Lake as compared with Wells of about one hundred miles.

It seems apparent in view of the superior service which can be extended via Wells that they will continue to move through that gateway or through Ogden and shippers elect to use the longer route for reasons of their own.

1726 Payette, Washington, and Adams Counties—carload shipments from the latter county reach the railroad at Weiser—are the only counties from which carload shipments are made that will receive the benefit of the maximum shorter haul via the proposed route through Crescent Lake.

Obviously the small amount of tonnage that would find a market in the San Francisco district would not afford proposed line substantial tonnage.

The location of these more easterly counties would also have same effect on inbound or received carload shipments shown on Newton's Exhibit No. 7, for the same reason, to the existing routes.

Mr. Manson will testify as to how those cars will be assembled to move over the cross-State line.

Referring to the supplemental special, which picks up the local business, and the one that takes the business assembled by the branch lines in southwestern Idaho (3165) and whether it stopped for rest and feed: The second special is made up from parts at Huntington, and it takes with it all the stock from branch lines and main-line points that is not ready for the through special train leaving Glens Ferry each Friday morning at 7 o'clock. The movement from Huntington is completed within the 36 hours to Portland.

I wish to make a statement with respect to Witness Wagner, manager of the Farmers' Cooperative Creamery Association at Payette, who testified to the effect that shipments of carloads of butter were eight days in transit from Payette to Los Angeles. I had a check of nine cars representing period July 6th to August 3d, and I found that these nine cars averaged 116 hours 52 minutes from the

1727 time loading was completed at Payette until arrival at Los Angeles, or slightly less than five days. This same service can be afforded like traffic to San Francisco via Wells, but no doubt would be better time than they hope to (3166) make over the new line across the country to Crescent Lake, thence to San Francisco.

Exam. ROGERS. You spoke of the assurance of a mill operation at Burns. How was that assurance expressed; was it a written agreement, or a contract, or what?

A. Well, the assurance to us, I believe, was through the fact that Mr. Herrick had entered into a legitimate contract with the Government for the purchase of that timber and its manufacture at a mill near Burns. He failed to conform to the requirements of the contract, and it was canceled during 1927.

I heard Mr. Magladry say that if the cross-State line were built certain of the lumber traffic would be routed from the Willamette Valley.

Exam. ROGERS. Would you regard that assurance equal to that that you had with respect to the Crane-Burns extension?

A. Well, that is merely an opinion. I don't think that the extension of a line over into the Willamette Valley that is already apparently satisfactorily served by the rail transportation would permit us to secure any large part of that traffic. Mr. Magladry may be mistaken in his opinion. If the line were built across I don't think it would change to any great extent the present routes being used by these manufacturers, lumbermen manufacturers, in reach of eastern markets.

I don't recall whether the Herrick contract was accompanied by a bond to the Federal Government to the extent of some fifty thousand dollars to complete that operation.

1728 I think there was a contract between Herrick and the Oregon-Washington Railroad & Navigation Company to complete the mill and have it in operation and complete the railroad by April, 1925. If the operation were completed, there was no other railroad by which the traffic could possibly be routed. (3168.)

Cross-examination:

Q. (By Mr. ELLIS.) You have made comment in connection with several of your exhibits, Mr. Goodwin, to the effect that you believe existing routes of traffic would be used in preference to the cross-State line by reason of better service. What type of service did you have in mind in connection with the cross-State line in making those comments or comparisons?

A. Well, I believe it would probably be a mixed train service. It might be daily if the business would justify it, otherwise it may be every other day. It depends entirely on what the traffic will justify in the way of service.

Q. Isn't this in substance what your discussion or testimony amounts to on that, that you think the service would be poor because the traffic was light, and that the traffic would be light because the service was poor?

A. No; there will be no demand for any large amount of business to the San Francisco market to be moved over that cross-country line, and there naturally will be branch line construction, which won't permit as rapid service as available over main line. (3169.)

As to whether if the traffic would justify it you would give just as good service over the cross-State line as you would anywhere else over your system is a correct statement, it would dependent on the character of the traffic.

1729 You never give as good service on branch lines as you do on main lines.

Exam. ROGERS. Well, I think what Mr. Ellis is getting at is this, take the main line from Granger to Huntington, if you had service over that line three times a week, and mixed train service at that, you wouldn't have any traffic as compared with what you have now. Take the main line any way you want it, that is now enjoying heavy traffic, and if you reduce the service to service three times a week, and mixed train service at that, you wouldn't enjoy the traffic, would you? (3170.)

A. No; if you take the traffic away, but as long as that traffic is flowing the service will not be reduced.

Q. (By Mr. ELLIS.) And we might expect the same thing on the cross-State line if constructed, might we not, that if you had the traffic there you would give the service to take care of it?

A. If the traffic developed we would build up the service as it would justify it. The maintenance of that service would have a great deal to do with continuing the traffic movement via that route, if there is any traffic to move.

It is not a fact that the lean traffic moving via the Wells line at the present time is due largely to the fact that we are giving service only three times a week. I don't believe it has anything to do with the fact that traffic is being routed via the longer route. The service is more than adequate to take care of the small amount of business that is offered for shipment to San Francisco.

As to whether a large part of the traffic from the territory served by the Wells-Rogerson line is perishable traffic, where time is an important element (3171): There are a great number of
1730 potatoes raised there, and some apples, but they don't find their market in San Francisco, except to a very limited extent. Some potatoes go to San Francisco.

Exam. ROGERS. Are you speaking of bridge traffic?

Mr. ELLIS. Yes; more largely bridge traffic from——

We handle a few carloads of butter and eggs, dairy products, things of that kind; not so much livestock, 381 cars of livestock, I believe. Time in transit is an important element on all of those commodities. Good service is desirable. We give it to them; if there is any perishable freight in sight we hold the branch line train until the traffic arrives at Twin Falls and expedite it all possible.

Q. Well, as a matter of practical operation, when you have only three trains a week isn't it to be expected that your shippers to play safe will send it around on a route where they know the trains are operating every day?

A. Well, they may do that, yet on the other hand they may figure on the date that direct connection is made at Twin (3172) Falls and send their traffic so that it will make the connection without any delay at Twin Falls.

As to what extent the bridge traffic over the Wells line has been affected by the fact that our rate adjustment has not taken into account the shortened distance: The rate adjustment southwest of Minidoka does take that into consideration. From main line points west the rates are the same via both routes, but they are considerably lower from the Twin Falls district proper to San Francisco than the current rates via Ogden to San Francisco.

Q. Well, that doesn't entirely answer my question. Does that mean that in your opinion the rate adjustment has had nothing to do with the fact that the traffic has not been diverted to the shorter line?

1731 A. Well, there is practically no traffic moving from west of Mountain Home, Bliss, to San Francisco. The Idaho Public Utilities Commission has a complaint pending before the Interstate Commerce Commission at the present time covering that very point. That complaint is not a complaint from the shippers or the parties who paid the freight.

Q. Now, do I understand your testimony to be that the resources and (3173) traffic along the Rogerson-Wells line exceed those along the route of the cross-State line?

A. Well, I think there is perhaps a little more traffic there now, and prospect for an increased traffic in the local territory served by the Rogerson-Wells line that does not appear to be available on the cross-State line. The cross-State line will be about twice the length. In my opinion, the intermediate territory on the cross-State line will never produce any traffic.

Q. (By Mr. ELLIS.) What did you have along the route of the Rogerson-Wells cut-off in the way of traffic before your line was constructed? Was the mining development in operation at that time?

A. There was this big ranch. A lot of prospecting had been done. As to whether any more prospecting had been done at Contact, Nev., (3174) I couldn't say. They have shipped quite a number of cars of ore from Contact in 1927. They didn't ship any from Contact before the Wells-Rogerson line was built. There had been small quantities hauled to a loading point at Rogerson.

As to how the total volume of available tonnage at Contact compares with Alkali Lake: I don't know that there is any tonnage available at Alkali Lake. I only know what I have testified to about the Alkali Lake situation.

In making my statement, I did take into consideration that there was no tonnage available along the cross-State line. I
1732 think it is very doubtful whether there would be any commercial use for that material at Alkali Lake. I have not made any personal investigation to find out whether there will be.

As to the ranches along the Rogerson-Wells line: I didn't (3175) see any ranches of any consequence. As to the ranch 30 miles in extent: It is along our line. This ranch is owned by a very large concern, and they own approximately three hundred thousand acres of land and lease some 800,000 more, so they are close to the line clear from Wells north to a few miles from Rogerson.

Mr. ELLIS. As a matter of fact, the officials of your company have always contended that the mining operation at Contact was of no importance so far as traffic is concerned, have they not, and that it never would offer tonnage to justify the construction——

A. Mining operations are always doubtful. You can't determine except after a large amount of development work whether they will be tonnage producers or not.

It is my judgment that the cross-State line, if constructed, will be an inferior line in type of construction and in service to the Rogerson-Wells line, which is a very well constructed branch line.

Q. Well, do you know how it would compare in construction to the (3176) type of line for which an estimate of cost of construction has been introduced here by Witness Buck, which he designated, I believe, a first-class and substantially main line construction?

A. Well, if it is a main line construction it will be superior to the Rogerson-Wells line.

Q. Referring to your Exhibit No. 74, comparing distances via the several routes, the right-hand columns showing percentage
1733 of through distance to San Francisco, Calif., and segregating the distance on the Short Line from that of the Southern Pacific, can you tell me where the end of the Oregon Short Line would be under your assumption there of percentages; does that assume that the Oregon Short Line would build and operate the cross-State line to Crescent, or that the Oregon Short Line operation would end at Crane, or some other similar point?

A. It assumes that the Oregon Short Line might operate it under a lease from the Oregon-Washington Railroad & Navigation Company, the same as they handle the line from Crane to Burns.

Mr. ELLIS. The distance you operate would make a difference in this percentage, is what I was getting at, and I wanted to understand how this (3177) percentage was figured. That was figured on the whole through to Crescent Lake.

A. Yes, sir.

Q. Referring to your Exhibit 76, showing movement in northern California, to what extent, in your opinion, Mr. Godwin, has the movement to northern California points shown on that exhibit been influenced or affected by the circuity of haul in reaching northern California?

A. I don't think that circuity has anything to do with light shipments. That same situation exists with respect to Utah products, where there is no circuity. They don't find any substantial market in San Francisco.

To a limited extent there is a market in San Francisco and northern California territory for the products of southwestern Idaho.

Q. And you will admit, I assume, that to the extent that the cross-State line would shorten the distance from southwestern Idaho to northern California markets the possibility of the producers
1734 taking advantage of those markets and selling there would be increased, would it not?

A. I don't believe that shorter distance would increase the demand in San Francisco for western Idaho products.

As to whether it would increase or strengthen the opportunity of southwestern Idaho to compete with other territories that (3178) are now situated closer to San Francisco than are the southwestern

Idaho producers: I don't think that condition would be changed. The distance wouldn't be threatened sufficiently to offset the advantage of those other producing districts that supply San Francisco that are located much nearer to that market.

Q. But assuming that their competitors are, say two hundred miles closer than they are now, and the cross-State line puts them on an even basis, won't southwestern Idaho sell more of their products in northern California than they are selling now?

Mr. SPENCER. Well, that is an impossible assumption.

A. I can't answer that.

As to whether I have assumed in my conclusions with respect to that question that regardless of the shortening of distance there will be no reduction in rates: It is my opinion that the rates via cross-country lines from Ontario will be perhaps the same as the rate from Ontario to San Francisco via Wells. In view of the excessive new construction they might possibly be something higher.

Q. And that assumption has been kept in mind in drawing your conclusions as to what benefits would accrue to southwestern Idaho, as to what traffic would move?

A. No; my conclusions are based somewhat on the fact that San Francisco is perhaps the most nearly self-supporting of any (3179) Pacific coast market we have, and they will not to any great extent purchase in large volume Idaho products.

1735 Q. Well, are they not purchasing products more distant than southwestern Idaho at the present time?

A. I couldn't say as to that.

Q. (By Mr. MCCULLOCH.) Mr. Godwin, why does the Short Line operate the Oregon eastern branch for the account of the Oregon-Washington Railroad & Navigation Company, or do you know?

A. I couldn't answer that question. I presume it is largely because it was disconnected from the Oregon-Washington Railroad & Navigation Company unit. It has operated them for the account of the Oregon-Washington Railroad & Navigation Company, as long as the Oregon eastern branch lines have been constructed.

The Oregon Short line has no interest in the Burns-Seneca line. Neither has the Oregon-Washington Railroad & Navigation Company.

Referring to the map, Exhibit 73, if traffic from Nampa or Caldwell or Payette to San Francisco should be (3180) routed via Wells, it would move east of Bliss to Minidoka; then down through Rupert and Burley and Twin Falls and Rogerson and Wells. And the distances shown in Exhibit 74 via Wells and via Ogden and via Crescent Lake and via Portland contemplate that routing that I have just described, so far as the route via Wells is concerned. That is the way the traffic is handled.

The branch lines shown on Exhibit 13 were usually constructed slightly in advance of full settlement of those lands and colonization. So that (3181) the people who settled those lands as soon as water was available, had transportation facilities to get their products out

to market. Those lines were built, however, with the full assurance that there was water available to irrigate the lands that were proposed to put under cultivation.

Q. Mr. Godwin, was the Rogerson-Wells branch constructed by the Oregon Short Line with the idea that it would be from the beginning and for all time to come self-sustaining, without the
1736 traffic that would move over it as a bridge line?

A. No; I don't think it was ever contemplated to for several years to be self-sustaining from local traffic that might develop along the line. It was hoped that the line would be self-sustaining without considering its use as a branch line for traffic from southern Idaho to California markets, but that all depended on future development.

Q. Well, I suppose you hope that, don't you, about every branch line and division or section of your railroad—you would like to see it self-sustaining—but, as a matter of fact, Mr. Godwin, are all of the branches of the Oregon Short Line self-sustaining? That is, if you would just simply take (3182) the traffic originated on them or delivered to points on them?

A. No; they are not all self-sustaining.

Mr. McCulloch. I had in mind the testimony of the auditor. I didn't want to cover ground that the auditor has testified on.

Redirect examination:

In my statement I discussed the difficulty of the valleys around Ogden and Salt Lake reaching or finding a market in San Francisco. Those exhibits won't show the comparative movement of the tonnage from Utah Valleys there to San Francisco and Los Angeles.

Q. Well, do you know from your intimate relations with the local (3183) situation whether the volume of tonnage from the large valleys you describe in Utah greatly preponderates to one section or the other—I mean northern California or southern California?

1737 A. The large volume moves to southern California, and in a nominal quantity to San Francisco Bay points. Distances are practically the same. No great variation.

Mr. Spencer. I want to know the comparative distance from the points of origin there at Salt Lake and Ogden to San Francisco via the Central Pacific on the one hand and to Los Angeles via the Union Pacific line, the Los Angeles & Salt Lake Railroad, on the other.

A. The distance from Salt Lake to San Francisco is 818 miles; from Ogden to San Francisco, 782 miles. From Ogden to Los Angeles it is 818 miles; from Salt Lake, 782 miles. The rates are the same to both destinations. (3185.)

My point is that although the distances are the same, about, to San Francisco and Los Angeles, the preponderating movement is to Los Angeles. The market is there. San Francisco is not an extensive market for those products that are raised in those valleys.

They are the same kind of products that are raised over in southern Idaho.

[File endorsement omitted.]

1738 PORTLAND, OREGON, *Tuesday, August 21, 1928.*

E. STACY was thereupon produced as a witness on behalf of defendants, and, having been duly sworn, testified as follows:

Direct examination:

I am a civil engineer in the employ of the Oregon Short Line Railroad Company, with 26 years' experience, 23 of them with the Oregon Short Line.

My duties have been and are broad in scope and include, among other things, location and relocation of lines, the making of estimates for proposed construction work generally, the supervising of portions of construction work undertaken, and the investigation of territories not immediately served by the lines of railroad with which I am connected; this with a view of determining traffic possibilities and the feasibilty (3187) of railroad construction in the same. This work, involving investigation, study, and report, has been special and confidential in character but extensive and has covered large territories during the past 15 years.

I have been over in the eastern end of this central Oregon country. During part of 1906 and 1907 I was engaged in some of the extensive surveying that was prosecuted in the central Oregon territory and have been over the major part of it, and am familiar with it particularly the location of the cross-State line proposed in this case. On the early morning of July 20, 1928, I left Burns to go over this line again and traversed the country along the route indicated in parallel black lines on the map marked Exhibit 3. Proceeding from Burns southerly to the location of the proposed cross-State line nearly opposite the Narrows, near milepost 140 of the railroad
1739 on the map referred to. The (3188) miles in the route traversed by me are indicated on the map progressively each 10 miles.

After proceeding about 10 miles south from Burns on this route, I encountered desert and unproductive land to milepost 30 on the map. Then proceeding westerly from milepost 30 to the OO Ranch at milepost 44, the land traversed consisted of unproductive areas entirely impossible of reclamation and cultivation. The margin along Harney Lake for several miles is thoroughly impregnated with alkali and will permit of no crop, growth, or cultivation. This so-called lake is now nearly dry.

Proceeding westerly from the Harney Lake area to the OO Ranch, the country traversed is largely of clay and hardpan formation, with some growth of greasewood and salt grass in the lower levels. None of it can be profitably reclaimed.

Upon arriving at the so-called OO Ranch, milepost 44, we found perhaps 600 or 700 acres of grass land that was devoted to the raising of wild hay, sustained by a spring. The volume of water, however,

is not large and increased acreage production at this locality is not possible to any substantial extent.

Proceeding westerly from the OO Ranch we arrived at the so-called Big Stick Creek, a dry creek near milepost 50. The country traversed is unproductive and forbidding, and consists of greasewood and salt grass flats. Here, at mile (3189) post 50, the projected line enters the Big Stick Canyon country and proceeds up same to the Wagontire Mountain, a distance of approximately 20 miles. The formation is largely lava rock; the canyon is dry and there is no living water.

1740 Construction along this route will be necessarily expensive, because of the heavy cost involved in moving lava rock. This cost will not be less than $2.00 per cubic yard, and the yardage is considerable.

I have had considerable experience in construction work where this so-called lava rock is encountered. In our Idaho country that is all we do have. I have had recent experiences. We are building every year some additional trackage amounting on an average to one or two millions a year worth of work, and it is all in the lava rock country.

Our prices for lava rock varied from $1.90 a yard to $2.12. A good deal of that has been adjacent to the present main line, where transportation was within a few hundred feet and (3190) everything was favorable, at least, or more favorable, in fact, than this central Oregon country, for getting the equipment in to do the work with and so on; also where there wasn't any water available along on some of this work water could easily be obtained from railroad tank cars spurred out there within a few feet of the work, and all of that, of course, would be a convenience that the contractor would not enjoy out here in central Oregon.

I think Mr. Buck made an allowance or estimate of $1.30 a yard straight for solid rock in his estimate. That is entirely too low for lava rock. We ask for bids from all the principal contractors and the bids are always consistently $2.00 or more.

Proceeding westerly from the summit of Wagontire Mountain near milepost 70, being milepost 170 on the proposed railroad location, we arrived at the extreme easterly end of the so-called Christmas Lake Valley. This takes us to milepost 100 on the route traversed by me.

1741 The territory covered consists of rough lava rock formation, with some inferior sagebrush. The work on this stretch is heavy and will be expensive because of the difficulty encountered in moving lava rock. (3191.)

Leaving milepost 100 we proceeded to Lake at milepost 129. The country traversed in this last stretch is a flat dry valley. There is no living water and large stretches of hardpan for the entire distance.

Lake is a little store and post office in a desert. Only 10 families get mail at this post office. The party in charge records precipitation and weather conditions for the United States Weather Bureau, and

from this source the annual precipitation was found to have been only 6 to 7 inches during the past several years. There was no evidence of any cultivated crop as far as one could see. We asked the woman in charge whether any crops were raised in the neighborhood, and she answered that it was impossible to raise crops because of the lack of water, and because, as she stated, "what the frosts did not get the jackrabbits did."

To the north from Lake is the so-called Christmas Lake, but same has been dry for the past ten years.

Proceeding from Lake to Fort Rock at milepost 162½, we traversed innumerable sand ridges and a general desert country. Fort Rock is in the west end of the Christmas Lake Valley. The proposed irrigation district there has, I am informed, been abandoned and the district dissolved on account of not being able to get any water.

There is a small irrigated ranch of approximately 60 acres sustained by a well operated by a gasoline engine near (3192) milepost 155, at a point some 7 miles more or less from Fort Rock. This is known as the John Ernst Ranch.

1742 I have had considerable experience in connection with irrigation problems over the past 20 years, and have yet to see an instance wherein production on a large scale by pumping has been successful. The nearest approach to success has been along Snake River on the Idaho-Oregon boundary in the Owyhee district, where the waters of Snake River have been elevated a distance of from 40 to 100 feet and perhaps higher in some instances, but in that location along Snake River the soil is of great depth and fertility, consisting in the main of a sandy loam. It is extensive in area and the pumping operations were conducted to an extent that some 40,000 acres were reclaimed, but the pumping operations were installed and progressed under a system operated by electricity obtained from the Idaho Power Company installed years ago when the rates for the service were low.

Later the rates were increased and the burden on the grower was so great that even with the rich country served, the grower was unable to stand the charge, and this condition was the principal inducement that brought about the action of the Government in undertaking the construction of the Owyhee Dam, which has now been undertaken.

When this is accomplished, the gravity supply of water will relieve the excessively burdensome charges for pumping (3193) now sustained.

In his testimony with respect to this district, Mr. Teutsch stated that the production would increase 25 per cent, when the gravity water was obtained. Such, or any substantial increase will, in our opinion, be impossible, the fact being that this land, which has been served by pumping operations, has had an unlimited supply of water from Snake River from the beginning, and it has been used.

1743 In this Owyhee district, too, the grower is favored with an elevation of about 2,000 to 2,300 feet, permitting of the

growing with security and confidence of a great variety of crops, including fruit, forage, grain, potatoes, vegetables and the like. At Fort Rock, however, in the Christmas Lake Valley, is an exposed and unprotected country at an elevation of about 4,200 feet.

In their report, published in October, 1915, by the Department of the Interior, United States Reclamation Service, in cooperation with the State of Oregon, on Silver Lake project irrigation and drainage, Engineers John T. Whistler, engineer United States Reclamation Service, and John H. Lewis, State engineer for Oregon, published tables, pages 34 to 39, inclusive, on frost data and temperatures as taken at Silver Lake, located some 20 or 25 miles south of Christmas Lake and also at Cliff on the north side of the Christmas Lake Valley, wherein they regard frosts registering 26 degrees Fahrenheit and below (3194) as a killing frost.

The years embraced in these tables cover the period from 1907 to 1915, inclusive, and show that during the month of April the average number of days with a temperature 26 degrees and below was 15 at Silver Lake and 18 at Cliff. During the month of May the average number of days for the 9 years involved was 7.3 days at Silver Lake with killing frosts 26 degrees and below and 12.8 days at Cliff. During the month of June the average at Silver Lake was .7 of a day, while at Cliff the average was 5 days. During the month of July the average number of days of killing frost 26 degrees and below was .14 at Silver Lake and .75 at Cliff; but even in July, according to the tables for that month, there were 1.8 days at Silver Lake when the thermometer was 32 degrees and below; while at Cliff there were 5.5 days 32 degrees and below.

1744 In August there was an average of one day during that month over the period of 9 years with a temperature of 26 degrees and below at Silver Lake, and 3.41 days at Cliff when it was 26 degrees and below, but during August there was an average of 6 days over the 9 year period during that month when the temperature was 32 degrees and below at Silver Lake and 11.4 days when it was 32 degrees and below at Cliff.

In September the average for the 9 year period was 6 days with a temperature 26 degrees and below at Silver Lake, and 13.7 days when it was 26 degrees and below at Cliff. (3195.)

While there are considerable areas of soil in the western end of the Christmas Lake Valley in the Fort Rock district that would raise crops if an adequate water supply could be obtained, this is not the case from the middle of the valley to its eastern end, a distance of probably 20 miles or more. In this stretch of the valley productive land does not obtain. Commencing with the east end of the valley and proceeding for 15 miles until we reach Lake, the soil is hardpan and grows nothing to speak of except greasewood. From Lake for a distance of 7 or 8, perhaps 10, miles toward Fort Rock are loose sand ridges with some salt grass growing in between them.

Then on to Fort Rock and the west end of the valley for a distance of probably 15 miles the soil is better and with productive possibili-

ties if climatic conditions permitted and if an adequate water supply could be obtained. Over this district there is a considerable growth of rye grass, upon which cattle and livestock can subsist.

Statement has been made that this area can be dry farmed because of the presence of the Russian thistle. According to my observation there is little growth of thistle in the Fort Rock Valley, but if
1745 it exists it is certainly no indication that the land can be successfully dry farmed. We have thousands of acres of abandoned dry farmed areas adjoining our rights of way in southern Idaho and in Utah (3196) where dry farming has been unsuccessfully attempted and the undertaking abandoned, but the country is almost covered with this pest.

On the question of sinking wells for water in this Fort Rock area, I am reminded by the conditions there obtaining of a district at Beryl in southern Utah. While the Beryl district is better than this from a standpoint of climatic conditions because of the much warmer temperature for longer periods, yet it has entirely inadequate rainfall for successful dry farming. It is, however, adjacent to the main line of the Los Angeles & Salt Lake Railroad Company, and if production in volume could be accomplished would enjoy the Los Angeles market.

There is a large subterranean water supply under the lands in this Beryl district, and during the past 5 or 6 years about 25 wells have been sunk to obtain water for irrigation purposes. These wells range in depth from 15 to 400 feet and the settlers upon the lands have been able to raise some alfalfa, but as yet no farm products to speak of have been shipped from the district and it cannot be said that it is a dependable district for agriculture from developments that have taken place to date.

There are other districts on the Los Angeles & Salt Lake Railroad near Cedar City, Enterprise, and Parewan, where irrigation by pumping has been carried on in a more or less ineffective (3197) way for several years and some considerable alfalfa has been grown, but the districts have not proven a success and the acreage cultivated is small and does not increase. Gasoline engines are used for pumping in the Beryl district and electric power is used in the other districts mentioned.

1746 We left Burns at 6.30 in the morning and arrived at Fort Rock shortly after 4 o'clock in the afternoon, and for the entire distance we did not encounter a single person, automobile, or other vehicle on the road.

In nearly all unsettled areas in these semi-arid districts in Idaho and Oregon the presence of considerable bands of wild horses generally obtains, if grazing is possible and any living water is to be found. Along this route no wild horses were to be seen.

Fort Rock consists of a settlement of perhaps 25 or 30 people. The only other settlement encountered in our journey from Burns was a farm house at the OO Ranch, and three settlers in the neighborhood of the Hutton Ranch at the base of Wagontire Mountain. The only cattle seen along the route were some 30 or 40 at the Hutton

Ranch, and some 8 or 10 cows at the OO Rranch. There undoubtedly is some little additional livestock at some of these ranches or connected with them, but the number must necessarily be very small because there is very little possible way of raising forage for them.

Fort Rock along the route of line was reached by traveling (3198) over trails evidently made by dry farmers who have long since left the country.

At Fort Rock we reached the so-called Bend-Lakeview road and proceeded up to Lapine, entering the Deschutes National Forest at milepost 171. The distance traversed was 40 miles. Some 16 or 17 miles of this distance is through the Deschutes National Forest, and about 14 or 15 miles through timber lands privately owned. Of all the entire stand of timber not more than one-third of it is suitable for manufacture of merchantable lumber, and the stand is light. The remaining two-thirds consists largely of black pine, commonly known as lodge pine, and suitable only for manufacture of railroad ties. (3199.)

1747 Lapine consists of a settlement of perhaps 100 people. We stopped here for the night and the next day proceeded to Crescent (formerly Odell), thence to Umli and thence to Crescent Lake. The settlement at Crescent consists of perhaps 35 or 40 people. At Umli, a settlement of section hands for the railroad consisting of perhaps 6 or 7 people, and at Crescent Lake perhaps 40 or 50 people, largely employees of the Southern Pacific Company.

Crescent Lake is a freight division point on the Southern Pacific Railroad. The improvements there consist of a two-stall frame enginehouse, frame depot, a two-story frame clubhouse containing 50 or 60 sleeping rooms for railroad employees, and a wye track.

There are some 6 or 7 feet of snow in the winter season at Crescent Lake, and we are informed that two rotary snow plows work there constantly during the winter season.

From Crescent Lake we returned to Crescent, and thence drove over to Bend, making 316 miles to this point. In the morning we drove from Bend to Burns, as indicated upon the map.

After proceeding east from Bend, a distance of perhaps 8 or 9 miles, we again encountered the desert country, and with the exception of a store and post office at Millican at milepost 345, and an eating-house and gasoline station at Halfway, at milepost 385½, and a store and post office at Suntex, there was no production, industry or settlement along the entire (3200) route from Bend to Burns until within 10 or 12 miles of Burns.

Near the old post office at Riley we crossed Silver Creek. This is the watercourse which is supposed to support an irrigation project of some 16,000 or 18,000 acres, but it was absolutely dry, and it had the appearance of having been dry for a considerable period

1748 of time. Its bed and banks were cracked, and no evidence of moisture obtained.

The territory traveled from the Double-O Ranch to the Des Chutes River does not afford sufficient water for irrigation purposes or to permit of settlement, the conditions rendering crop production impossible, even if the land were fertile, which generally it is not; and a substantially like condition obtains from a point 8 or 9 miles east of Bend until the Silver Creek drainage is reached at milepost 430.

I have reviewed the estimates of the proposed line that have been introduced in evidence and consider them low because of the very large amount of lava rock that must be moved, and because there are not available camp sites with water for the accommodation of contractors.

For the greater part of the distance along the route traversed there are no good roads and the contractor will experience much expense and difficulty in hauling supplies, machinery, and water.

My experience in the removal of lava rock has been extensive, and has extended over many years. We have found no way as (3201) yet to move it in large volume by explosion. It is penetrated with seams and crevasses through which the explosive escapes without moving it in large volume and breaking it up.

I have just recently completed the installation of 12 miles of additional main-line track between Shoshone and Minidoka, Idaho, wherein the grading qualities were comparable to large sections of this proposed line, and the 12 miles of track built with transportation advantages and main line adjoining, cost $90,000.00 a mile.

It cannot be moved in this central Oregon country, in my opinion, for less than $2.00 a yard. In fact, I was compelled to pay $2.12 a yard for the removal of some of it in the
1749 double-track construction to which I have just referred.

I have, therefore, made my own estimate on the cost of the construction of the proposed line after a review of the territory and a re-checking of the profiles, and in my opinion it will cost $11,294,645, or $61,052 per mile for the 185 miles involved. My construction contemplates 90-pound rail and creosoted ties. My detail of estimate is submitted herewith.

(Said estimate was thereupon received in evidence, marked "Defendant's Exhibit No. 81, Witness Stacey.") (3202.)

In my estimate of the cost of construction I used one-half ballast section as compared with Mr. Buck's full-ballast section. My estimate runs into more money. Mr. Buck was too low on his lava rock.

Q. Now, the question was asked yesterday or day before by the commissioner as to why there was so much frost there in the Fort Rock Valley, or in the west end of the Christmas Lake Valley, when the elevation was not as high as other elevations where less frost seemingly obtained. Did you make any inquiry as to that particular question or problem when you were on this trip?

A. Yes; the night we stopped at Lapine I was talking to an old gentleman in the restaurant there, and he said the night before we came was the first night they hadn't had frost at Lapine this

summer—we stopped there on the night of July 20th, this year—and I asked him why they had frost there so frequently in the summer, and he says, "Every night, especially around two or three o'clock in the morning, there is a breeze springs up from the direction of Three Sisters, and that brings the cold wind from
1750 those snow-covered mountains." That is the principal reason for the cold nights and frost in that country. (3203.)

The Three Sisters are located west of Bend, I think, and north and west, I think, of Lapine and Odell. They were pretty well covered with snow when we were there in July. Those so-called Three Sisters are very high mountains. They are high enough to be covered with snow in the summer time. I don't know the elevation of them. I have seen them; they were very well covered at the time we were there, and the old gentleman said the snow stayed on them all summer. The significance I attach to the fact that there is snow on them all summer is that it means it is colder up there than if snow wasn't there. In 1907 also I was down in the Pitt River country in California 30 or 40 miles from Mt. Shasta at an elevation of about 3,000 feet, in early August; the days were quite warm and every time we got the wind from Mt. Shasta we got a frost that night. From my experience and observation a desert country is peculiar as to frost at night. (3204.) A desert always cools off more rapidly at night than any other country, and the dryer the air the more rapidly it seems to cool off for some reason. That has been my experience of it in this inter-mountain country.

Q. Now, this country in central Oregon that is described as the high desert, does that end at the Nevada line or the California line? Just relate your experience and surveys and reconnaissances that you have made on south. How extensive is this desert area?

A. I have covered the country pretty well from Harney Valley to Reno, Nevada, from Caldwell to the Jordan Valley, the McDermitt country, and the Pudding River, to Winnemucca, from Twin Falls to Cobre, Nevada, and also from Twin Falls to Wells,
1751 Nevada, and before the separation of the railroads I was on grade reduction on a line which is along what is now the Central Pacific from Elko to Lucin Junction, and got, I think, a pretty well defined idea of the northern Nevada country.

The northern Nevada country, the northern Nevada desert, is very similar to this central Oregon. In fact, the central Oregon country is a continuation of that Nevada desert.

There was no place in my travels in Nevada, which was done by team, where I didn't get water every night, making thirty or forty miles a day, and stock water, living water, was more frequently obtained than in this trip across central Oregon (3204) along the proposed cross-State line.

After leaving the springs on Wagontire Mountain we encountered no natural living water until we hit the Deschutes River, a distance of about 90 or 100 miles.

I made surveys from this Oregon country down across the northern Nevada country. I ran a line from this proposed cross-State line out, leaving west of the Double-O ranch some 8 or 10 miles, and I ran that line down some 250 miles south into Nevada, and later got orders to abandon it. I spent about 4 or 5 months in that. I did that in the spring of 1907. In leaving the Double-O country there is a spring just back of Iron Mountain there, then it was 30 miles to the next spring, called Mule Springs, which went dry in the summer, and then another 30 miles before we reached the Warner Lake country, so that in the summer time there would be a distance in there of 60 miles between water holes. The country off to the south there is similar in all respects to this cross-State line, a large desert without any settlement, sage brush on the benches, greasewood in the bottoms of the valleys. (3205.)

1752 I didn't have direct charge of the construction of the Rogerson-Wells line. I revised the location in 1913 into Cobre, and in 1923 I had charge of the location of the line to Wells from Rogerson, prepared the estimates and the construction profiles and I was over it frequently. I went over it after it was constructed and criticized it. The character of the construction of that line was what we call medium good branch line construction. We used 90-pound rail. It is better than our main line was 25 years ago, has heavier steel, better all-around construction. The character of the country traversed as compared with the cross-State line, as to productive capacity is as follows: In leaving Rogerson and going to Wells living water is encountered every 8 or 9 miles along the entire route, and for a good deal of the distance we followed the Salmon River, which is composed of valleys, meadows, ranches, (3206) owned for the most part by the Utah Construction Company. They have 8 ranches, I think, directly along that railroad, and out through other localities more or less distant they have about 20 more.

As to how many ranches there are tributary to it that are producing ranches, that is, that raise any product for transportation, they have, I think, 27 ranches all told, all of which are more or less tributary to this line.

Q. Now, you speak of a ranch—are you discussing that as an irrigated, diversified ranch, or what kind of a ranch? Give us some idea of the way it is operated and the extent of it and what they produce.

A. The hay is for the most part the natural native hay, very similar to that operation now in the Harney Valley along the Silvies River. The hay is mostly fed to the cattle——

1753 Q. Well, how is it produced?

A. By irrigation.

Q. What kind of irrigation?

A. Some of their ranches have a system of ditches, some of them use the flooding system almost entirely, similar to the Silvies River.

Some of those ranches cut several hundred tons of native hay, and some of them cut several thousand. It is a sufficient operation to sustain their livestock industry, which before they went into the sheep business (3207) sustained about 40,000 head of cattle. I think——

Q. Is that more cattle than they have got in all the Harney Valley?

A. I think it is about as much. I forget the exact number testified to, but substantially the same as in Harney County.

That is, as these traffic optimists have pictured in Harney County. The total hay land in those ranches would be in the neighborhood of from 40,000 to 45,000 acres. Their grazing lands probably cover 2 or 3 million acres all told. They own outright 3 or 4 hundred thousand, and they lease, I think, almost a million from the Southern Pacific Company, then they have a lot of Government range land in addition.

Exam. ROGERS. Mr. Stacey, how did you arrive at the conclusion as to how many cattle there were in Harney County?

A. I think I got my information from my memory in regard to the testimony that has been presented at this hearing. (3208.)

Exam. ROGERS. Have you analyzed the testimony that has been presented here?

1754 A. No; I just took his statements of it.

Exam. ROGERS. Can you remember all the testimony that has been presented here as to cattle in Harney County?

A. I remember the statement of that one witness. That witness was Mr. Duncan. I remember him saying that he estimated 50,000 head of cattle in Harney County. I did not look at the assessment roll there and see what there was. (3209.)

As to whether there are any roads through this central Oregon country along this line of survey for 20 or 30 miles on either side of it except the road from Bend to Burns, there are not; outside of a few stretches on the Bend-Burns line, there is the original sagebrush trail that was made in the early days, and the rainfall is very light, so they don't get washed out very much, so there is just the natural trail across the country, very crooked, most of it.

Cross-examination:

I went over this line late in July of this year, leaving Burns July 20th. (3210.) That is not the driest season of the year in the desert country when you expect to find conditions at their worst. I think it gets drier a little later in the summer than that, that is, in August or the first part of September, the ground gets drier than it does in July. It does not get very much drier in August than it does in the latter part of July; it can't get much drier. And if the water holes are going to be dry any time in the season, you will find them in July and August, and September.

In making the trip I observed stands of sagebrush at numerous places across the country, but I would not call them heavy

1755 stands of sagebrush. I certainly did not find sagebrush that look almost like trees. It all looked about knee-high.

Q. Didn't find any sagebrush that was 6 or 7 feet high (3211) and 6 inches through at the base, or nearly that?

A. Nothing like that. I saw in the bottom of some of the washes where moisture was—where the ground was a little more moist and looser than the benches, sagebrush, probably a few sticks of it 5 or 6 feet high, maybe 3 or 4 inches through at the bottom.

Beginning at milepost 10, and from there to milepost 30, is a desert section. After you cross the Silvies River there and get out of the hay bottoms you are in the desert. That area between mileposts 10 and 30 is not pretty well settled up with people living all along the road there; we saw 2 or 3 empty houses, none of them occupied. The road at that joint crosses a high point called Wright's Point that projects out into the valley.

Q. Then at milepost 30 the road drops down towards Harney Lake, where there is rather a low, level stretch of land for some distance, that is now being used for raising hay?

A. I didn't see any hay there.

Q. Didn't you find that section of the country settled, a number of ranchers living along through there? (3212.)

A. We saw—after we left the Silvies Valley we saw no inhabitants until we drove into Mr. Hanley's Double-O ranch.

Q. That is for what distance?

A. Mr. Hanley's ranch, I think, was at milepost 44, on the speedometer.

1756 Q. And the distance to his nearest neighbor towards Burns is how far, did you say?

A. Along the route that we travelled after—we left the Silvies hay fields probably at milepost 10, and the next inhabitant in the county was Mr. Hanley's ranch at 44; that would make a distance of 34 miles.

Q. Do you know whether there are ranchers living in that territory and around Harney Lake, or is it your testimony that Mr. Hanley's Double-O ranch is the only ranch that is occupied in that territory?

A. There is another ranch house down below Mr. Hanley's ranch a couple of miles that used to be occupied in 1907. We didn't drive over to it to see or not. It is a small ranch compared with Mr. Hanley's.

Q. Have you made any survey away from the road that you say you traversed and around Harney Lake, on the south shore, to what extent that country is settled and producing crops?

A. You mean the Blitzen Valley?

Q. No; the section around Harney Lake, around the shores of the lake? (3213.)

A. I have driven around the south side of the lake in 1907, but we didn't go that route this trip.

Q. And you don't know to what extent that country has been settled up since 1907, from your own investigation?

A. Adjoining the lake there we could see across the lake into the other side from our route travelled. We didn't look very far into

the country. In fact, I remember one or two buildings over there. Whether they were occupied or not I don't know, that is, outside of the Narrows store.

1757 Exam. ROGERS. Mr. Stacey, I think if I were coming across that what I could see from the road wouldn't be any guide as to what there was there. Do you agree with that?

A. Well, the route we travelled, of course, was on one side, and then on the other, more or less, and I think we could see several miles each side. There was no indication of any travelled road leading out in any direction, either way. (3214.)

I haven't made any trip around the south shore of Malheur or Harney Lakes since 1907. I could see across there on this trip, however. Nor have I made any trip down into the Blitzen Valley. Then west of the Double-O ranch, no settlers were found until Wagontire Mountain is reached. There were 3 ranches that we could see on the side of the mountain—the 2 Hutton ranches, and the Wagontire post office, 2 or 3 patches of rye hay upon the hillsides, a little native meadow hay where there were little springs at 2 places, I think. Now, those ranchers have been living there for quite

1758 a number of years. The Huttons and the Egley ranch, I think, were there long before any railroad survey. I understand they were.

Q. And they have good wells and raise all the grain they need for their livestock, all the feed they can use for their livestock?

A. Well, the operation there, of course, is very limited as (3215) regards hay. They no doubt run cattle along the mountain there for what winter feed they can grow.

Q. Now, between the Wagontire and the Double-O there is quite an area of low, marshy land where good grazing exists, is there not?

A. From the Double-O ranch to the Big Stick Canyon country is 8 or 9 miles. Those flats are salt grass, some alkali. The grazing possibilities are very poor.

Q. Well, you always find a great many cattle grazing in that vicinity, don't you?

A. Not on salt grass.

Q. Well, the cattle are running in quite large numbers west of the Double-O ranch and between there and Iron Mountain?

A. The sagebrush bench country up above those salt-grass flats had a very scanty growth of grass until you got up on the slope of Wagontire Mountain.

Q. Then between Wagontire and Lake and Christmas Lake Valley your description of that was to the effect it was very rough country, with greasewood and sagebrush?

A. Not greasewood up on the mountains—sagebrush.

Q. And you find your next settlement at Lake. Are they doing any farming, dry farming, there at the present time?

A. None that we could see, and the postmistress advised us that there wasn't any. (3216.)

1759 Q. They run some cattle, though, on the ranges, don't they, in that vicinity?

A. They have a few extra cattle around there; I know that I saw a cow in a corral there with a little pile of hay alongside of it.

And across at Fort Rock we found a crop being raised by pumping irrigation, on the John Ernst ranch. That is the only ranch we visited. We did not visit the Parks ranch. The John Ernst ranch was the only green spot on the valley. He had a ranch there with approximately 60 acres, I would say, pumping water by gasoline engine from a well. He had an alfalfa field and I believe some grain. That is not all I saw him produce; he had a little garden patch alongside of his house and I think he had a few cabbages there; a few potatoes, if I am not mistaken. (3217.)

Q. Now leaving the Fort Rock Valley, you got into the timbered area, and I believe you stated that the timber was of poor quality; just how much territory do you take in when you estimate that the timber was of poor quality?

A. I take in just what I saw.

Q. Just what you saw in traversing the highway?

A. In going through from Fort Rock to LaPine, LaPine to Odell, Odell to Umli, Umli to Crescent, and Crescent to Crescent Lake, and from Crescent Lake back to Crescent via another route.

Q. Do you think you saw the better stands of timber in traversing that route?

A. I think I got a fairly good idea of the territory that would be traversed by this cross-State line.

1760 Q. Well, as a matter of fact, you find the better grades of timber at certain levels and you have to follow around the ridges to find the good timber, do you not?

A. Well, we crossed over the Walker Mountains and down again. It all appeared very much the same. I didn't notice any substantial difference at varying elevations.

Q. You didn't make any investigation at any points off the line that you say you traversed for the purpose of making this report; you didn't go either north or south of the line?

A. Well, we were at LaPine, which is some 30 miles north of where the cross-State line would be.

Q. Well, is it not often true, Mr. Stacey, that a line of (3218) railroad is constructed through the worst section of the country and that you will find both to the north and south of it fertile and more productive lands?

A. Yes; in places that is true.

Q. Well, that is a general rule, to get a practical line the survey will hold to the lowest—where they can get the lowest grades and keep a common level, as much as possible, and that it takes you away from the better class of land?

A. No desert land is much good unless you can get water on it.

Q. But, as a matter of fact, the location of the line of railroad itself, your survey, is not affected by the question of fertility of soil

at all; it is affected more largely by where you can get the best line and you will expect the product to get to the line in some way?

A. Oh, yes; the country is all a range country.

1761 Q. You spoke of the Teutsch report on the Owyhee and questioned Mr. Teutsch's estimate of a 25 per cent increase as soon as the gravity supply of water was obtained, and at the same time stated that irrigation by pumping had not been a success. I am wondering how you can justify the two statements.

A. The raising of crops under pumping is a success, but the financial side of it was not a success.

Q. Well, have they been utilizing the district under pumping to a full 100 per cent capacity?

A. As much as the average irrigation project. (3219.)

Q. And regardless of whether it has been a financial success under pumping, you think they have been operating their lands to 100 per cent capacity?

A. As much as the average irrigation project operates it.

And in my judgment there would be no increase in that production to be expected through furnishing a gravity supply. That does not prove to me that the pumping operation was fairly satisfactory to the farmers. Pumping charges were more than they could bear. That was the main argument that was used to induce the Government to build the Owyhee Dam, was to rid the farmers of those pumping charges. But they have continued to pay them and to farm their land to 100 per cent capacity. That is better than abandoning it.

Q. In connection with this 12 miles of main line, which I think you said was double-tracked, where you paid the $2.12 for lava rock excavation, would you say to what extent that price was affected by the fact that it was double-track construction and the work had to be carried on so as not to interfere with main-line trains?

1762 A. Very little of that interference. We paid $2.00 a yard on the Rogerson-Wells for lava rock, which is away from any present tracks. (3220.)

That is a factor to be considered in removing rock. It also has its compensating advantages, though, being close to transportation. However, this track, this certain stretch here that I mentioned, was far enough away so there was practically no danger of blasting rocks on the present track. We moved the telephone line, the Western Union Telegraph line, over to the other side of the right of way, and they had a clear field.

As to whether we had very much of this lava rock construction on the Rogerson-Wells line, it was lava rock so far as Shoshone Creek, which was over in Nevada just about 7 or 8 miles. There were probably 30 miles of lava rock. In spite of our 30 miles of lava rock, our actual cost of construction on that line was far less than I have estimated here per mile for the cross-State line. The cost per mile of the Rogerson-Wells line was approximately $40,000, and I am estimating $61,000 for the cross-State line. (3221.) As to wherein the conditions are sufficiently different on the cross-State

line to justify a difference of $20,000 per mile, because the major portion of the rock excavation on the Rogerson-Wells was south of the lava rock section, and that was, I believe, $1 or $1.05 per yard. We had very considerably smaller grading quantities per mile on the Rogerson-Wells line than on this cross-State line.

As to whether I think the presence of wild horses is indication of fertility of the area, or the fact that there is good grazing
1763 there, it is a sign that the country is not used very much or the wild horses would not be there. The significance of my statement that I saw no wild horses on the entire trip is that it indicated to me that it was a very dry country, a long ways to water holes.

Q. (By Mr. ELLIS.) Well, don't you know, as a matter of fact, Mr. Stacey, that that country has been overrun with wild horses to such an extent that cattle and sheep men have been up in arms over it, have been instrumental in starting horse meat canneries and fertilizer factories to get rid of them? (3222.)

A. Yes; indeed. I found lots of them out there in 1907, but I always found them within reasonable distance of water holes.

I am certain I saw no wild horses on this particular trip that I made across. If wild horses are being gathered up in order to preserve the feed, if they have cleaned the country out of wild horses, the fact that I saw none on the trip would practically have no significance. But if they had not, it is an indication that it is a long ways to water holes. I do not know what the fact is, whether they have cleaned it out or not.

In my Exhibit 81 is an item of $291,000, for freight and fares. The material items included in the freight portion of that account are contractors' machinery and supplies. It is a general all-embracive figure that includes all items of construction cost wherein freight is involved—all contractors' stuff that is necessary to build the (3223) railroad. It is true that later on, under the heading rails, I have another allowance for transportation; that covers hauling the rails.

1764 Q. Then this $291,000 is freight on everything except rails?

A. The contractor never lays the track; we lay the track. The contractor builds the roadbed.

As to whether it is customary to use first grade creosoted cross ties in a country such as this line will traverse, it will be, I will say, in the next 2 or 3 years. We are increasing the percentage of creosoted ties very materially each year, and it is my understanding that in 2 or 3 years we will use nothing but creosoted ties. On the Rogerson-Wells line we had sample stretches of creosoted ties. We are using creosoted ties in places all over the Oregon short line. This is done more or less in an experimental way thus far. We have authority to treat so many creosoted ties every year, and the number is increasing much each year, and I have been told by the man who has charge of the tie department that in 2 or 3 years they will all be creosoted, it gives much longer life. (3224.) Creosoting

adds about 35 cents to the cost of the tie. As to why we should provide for a better standard of construction so far as that item is concerned, on this cross-State line than we are actually using elsewhere on our system, the present construction we are doing this year is going in 100 per cent creosoted ties. That is on our main line, but some secondary main-line work is also creosoted. We have not paid as much as $1.75 for the ties that we have been purchasing recently; that is the figure after we buy them, treat them and get them on the job. That is what we figure it would cost us out here on the line.

(3225.) That is substantially the price of the creosoted ties
1765 that are going into our present construction. There is a lot of accounting to go into that. It varies a few cents in different localities.

Taking this estimate as a whole, it does not provide for a better class of railroad, a higher type of railroad, than our Rogerson-Wells line. It is substantially the same. The main difference is we have used a half section of ballast on this line where the Rogerson-Wells had a gravel surface. To that extent this would be a better line than our Rogerson-Wells.

Q. How about your grades and curves?

A. Are you talking about—I would judge you mean the nature of the roadbed?

Q. Well, I am including all of the physical characteristics of the line, which make it suitable for main line operation or otherwise.

A. This line of course was located on eight-tenths of one per cent ruling grade. The Rogerson-Wells line was located on a one per cent ruling grade, with a little helper section at Summer Camp Pass. (3226.)

I don't know as to whether that fact alone would make a material difference in the cost of construction. There would be some increase in the amount of grading and the amount of fill to be built quite substantially. The construction of those fills and cuts reducing the grades will not compensate us by lessening operating costs unless we have a heavy tonnage over it. If your engine is running light, with light tonnage all the time, there would be no material difference.

Q. Now this desert that you crossed in following the route of the cross-State line is the same desert that you crossed down on the line of the Central Pacific and the Western Pacific in Nevada, is it not?

1766 A. The country is substantially the same, only those railroads follow a stream of water down there, which is lacking up here.

All of those ranches that I spoke about on the Rogerson-Wells line are within 20 miles of that line, except 2 or 3 ranches. (3227.)

I determined how many cattle were down on the Rogerson-Well cut-off in the following manner: I was in there on surveys and the superintendent of the ranches told me. I camped at the various ranches on the surveys. I simply took the superintendent's figures

and remembered them. The number of cattle on the Rogerson-Wells line was not the determining factor in the location of that line. We located that line according to the topography of the country.

I don't know as I could tell you whether that line was located and constructed as a bridge line and not by reason of the local traffic to be served along it. I was instructed to make the survey; just what was back of that I could not tell you. They did not tell me to make the survey and locate the line where it would be convenient to haul out this cattle; (3228) they told me to locate the best line in the country. And I did not give any particular attention or consideration to what I found in the country when I went through, not as governing the location of the line.

Q. Now how far out on this plateau does the cold breath from the Three Sisters affect the land in your opinion?

A. I never did any camping out in the desert in the summer time there, other than stopping at Burns a good many nights at various times.

1767 Q. Do you think that cold breeze gets over the Walker Range and on out here 100 to 150 miles from Crescent, or do you think that information as to the breeze from the Three Sisters only affected the Crescent community?

A. I would judge from that frost data given at Christmas, at Cliff and at Silver Lake, that the Three Sisters must have had some effect over there by the temperatures given.

Extending south from the route of the proposed cross-State line, the high desert practically goes clear to Mexico, with variations, hills in between desert ranges. (3229.)

Naming the lines of railroad between Mexico and central Oregon that cross that desert area from east and west: The Southern Pacific crosses through the southern part of the country; also the Santa Fe. Through Colorado we have the Denver & Rio Grande, and through Nevada the Western Pacific and the Central Pacific. The Union Pacific through Wyoming. Then we have the Northern lines through the Dakotas and Montana. There is also the Los Angeles & Salt Lake from Salt Lake down to Los Angeles.

Q. Now in the 150 or 200 miles of desert area crossed by these various lines you have mentioned, have you been through the territory or over those railroads across the desert areas at all, or over any of them?

A. I have been over several; I haven't been over all of them.

Q. Those that you have been over would you say are running through a country that, from the standpoint of production of local traffic, is any better than this central Oregon country 20 miles to the north and south of the route of the proposed cross-State line? What is your judgment about that?

1768 A. It is not my judgment—it is my judgment they did not cross this desert for the local revenue; they crossed those deserts because there was not any other way of getting (3230) around them to get to their objective on the coast.

Q. Well, with respect to the routes of those other lines than across this desert area, the chief function and value of the lines, I would take it from your answer, would be as a part of a through transcontinental route and for bridge traffic rather than for the origination of local traffic adjacent to the lines in the desert area?

A. Oh, yes; certainly.

Q. Have you given any consideration to the possibility of the proposed cross-State line between Crane and Crescent Lake serving largely that function of creating a new transcontinental route between the East and the West, and providing as its chief function, or one of its principal functions, a line for the use of bridge traffic?

A. No. The traffic department has gone into that. I have not gone into that myself.

I said that in 1907 I ran a line 250 miles south from a point about 8 miles west of the Double-O ranch. As to how near that got me to a connection with the present line of the Western Pacific or the Central Pacific across Nevada (3231) we stopped the line at a place that was known as Duck Valley, south of Surprise Valley, Nevada, and north of the Black Rock Desert in Nevada. The Western Pacific was being constructed then, probably 40 miles north of where the Western Pacific is now in the Black Rock Desert country. The end of that survey I made from the line of the Central Pacific at
1769 its nearest point was 70 or 80 miles. As to the purpose of that survey, whether it was for a branch line from the Oregon Eastern Railway down south to a connection with the Central Pacific, the impression I got in those days was that we were exploring more than anything else, finding out what was in the country. That line was started out there with no particular objective, as far as I was instructed, and as I kept making reports, continually it became more and more unfavorable, and I was finally told to abandon it.

Q. Has there been anything in your testimony that was intended to leave the impression that the construction of the Rogerson-Wells branch was not justified from the standpoint of public convenience and necessity?

A. Before the construction of that there was insistent demand, from the Twin Falls country especially, for a short route to San Francisco.

Exam. ROGERS. Do you know that? (3232.)

A. Beyond that I could not say.

Exam. ROGERS. Do you know that, Mr. Witness, or does the traffic department know about that?

A. I have read in the Twin Falls papers accounts of meetings that were being held at various times, and I have talked with the ranchers in and around that district quite frequently. I think I have got a fairly good cross-section. But beyond that demand on the part of the people for the cross-State line, I have no definite knowledge. My position does not give me that inside information, whatever it might be, beyond that.

Q. (By Mr. McCULLOCH.) You are simply in the operating department of the Short Line and you are not familiar with the traffic of the line so much as the operating end; is that correct?

1770 A. I work under the direction of the chief engineer, not the operating department.

Now, I mentioned two or three million acres of grazing land adjacent to the Rogerson-Wells line. As to whether I pretty generally went over those lands to see the character of them and determine (3233) whether they were suitable for grazing, I had crossed them by several different roads. As far as knowledge other than gained from crossing that range in various directions from the roads, I have made no special research. Those two or three million acres do not all lie within 20 miles of the Rogerson-Wells line. Some of them were further away than that. The bulk of them, though, were within 20 miles.

Q. Would you say, Mr. Stacey, that you had made such a report of the area on Exhibit 3 enclosed by the irregular brown lines and labeled "High Desert nonproductive area," as to the character of soil conditions, population, possibilities of production, matters of that kind, as you would wish to give if you were employed as an engineer to make a survey and report on those subjects to a railroad or anyone else that was employing you for that purpose?

A. I certainly would not want to give any person I was employed by the idea that there is any substantial tonnage to be expected from a country of that kind.

Q. That was not just my question. What I wanted to know was, if you had made such an examination of the territory throughout the area enclosed by this irregular brown line on this exhibit as——

A. This is the nonproductive area, I think, shown by the dotted brown line rather than the orange-colored line (3234) (indicating on Exhibit 3).

1771 Q. In the territory within 20 miles, generally speaking, on either side of the route of the proposed cross-State line between Crane and Crescent Lake, have you made such an investigation of entire area, as to its natural resources, their present development, the possibilities of their future development, fertility of the soil, possibility of raising crops, possibility of sustaining a livestock industry, possibility generally of producing traffic or tonnage for a railway, as you would expect to make as an engineer if you were employed for that specific purpose?

A. No. If I was employed to make a report on that, of course I would make a special trip out there. I have been over it off and on for the past 20 years, at various times, but I would want to reinforce myself with a trip over it to notice any change that might have occurred, if I was asked to make a report on it, of course.

My total inspection of this area just described from Burns over to Crescent Lake until I got back to LaPine took three days. Going across then it took me about a day and a half (3235) to make the inspection I did—a little better, probably a day and three-quarters

The existing main or branch lines of the Oregon Short Line do now traverse what would be called arid or nonproductive areas in some instances. In southern Idaho where irrigation has not been developed it is arid country. There are extensive areas traversed by existing main and branch lines of the Oregon Short Line that at the present time are now arid and nonproductive, certain sections scattered throughout the State, of course, between the irrigated areas.

1772 Q. What investigation did you make last summer, or at any time, to enable you to say that the soil or soils along the route of the cross-State line were not susceptible of reclamation?

A. The water is the controlling thing in reclamation. No matter how good the soil might be, unless you can get water on it it is just worthless for any agricultural purposes.

Q. Well then, all you meant to say by your testimony on that point was that water lacking there could be no reclamation, but you did not wish to undertake to say that if water could (3236) be supplied, either by surface irrigation or from subterranean sources, that the soil was not fit or capable of producing crops of some kind?

A. There are large areas where the soil is unfit for cultivation, even if they had water available.

Q. Now what investigation did you make or information did you get to determine that?

A. In the greasewood alkali country, flat, occupying the lowest part of the valley, with no chance to reclaim through drainage, it is not agricultural land, in my judgment. I have never seen it accomplished.

I have seen and known of instances where water was put on such lands and it was ascertained that they were incapable of cultivation with water. I have seen attempts made to reclaim this alkali land, but never where this alkali land occupied the lowest part of the country. It is all right where you have a place to drain that water away and carry the alkali with it, of course, but out in these interior basins you can't reclaim the alkali flat because there is no place to drain the water to.

1773 As to whether the frost conditions which I described in the Christmas Lake and Fort Rock Valleys were peculiar to those valleys, or whether similar frost conditions were encountered in any part of the (3237) territory served by the lines of the Oregon Short Line, we have no areas on the Short Line as far as I know where we have frost conditions like that.

Comr. McMANAMY. Mr. Stacey, is your estimate intended to be in opposition to Mr. Buck's estimate or in support of it?

A. In support of it, with that minor correction, that I thought he was too low on his lava rock estimate.

Comr. McMANAMY. What was the date—did I understand you to say that you stayed all night at Lapine on your trip west?

A. Yes, sir.

Comr. McMANAMY. What was the date?

A. The night of July 20th.

Comr. McMANAMY. Any indications of frost there on that night?

A. No. He said the night before was the first night he had not had frost.

Comr. McMANAMY. Why I asked is, I was about three days behind you and I didn't see any indication of frost.

The WITNESS. No; he said it warmed up. There was no frost the night we were there either.

Comr. McMANAMY. Now his position was that the frost came from the cold winds from Three Sisters.

A. From that direction, those high snow-covered mountains.
(3238.)

Comr. McMANAMY. Yet the Three Sisters are located north of Bend?

A. I thought the Three Sisters were really west of Bend.

1744 Comr. McMANAMY. North and west, or west and north?

A. Possibly they might be somewhat north.

Comr. McMANAMY. And all of that irrigated district around Bend and Prineville is much closer to the Three Sisters than Lapine?

A. Yes; they are closer. The direction of the wind would have a great deal to do with that, though, I understand.

Comr. McMANAMY. What is the value of that land across there, that section of the country through which this survey passes, per acre?

A. Well, it is practically all range land. There is a lot of vacant Government land, I would judge from the appearance of it. I would hardly know. It would be about the minimum value that is put on land, whatever that minimum is.

Comr. McMANAMY. Well, you have included it in your estimate here for right of way at ten dollars an acre.

A. That is in the private holdings, I would judge, where it has reference to Harney Valley and the OO ranch.

Comr. McMANAMY. Well, 1,320 acres at $10 an acre, does that include your entire right of way?

A. Yes. Some of that is vacant Government land, of course.

Comr. McMANAMY. Then you have 845 acres of timberland at
(3239) $50.00 an acre.

A. That is the private holdings.

Comr. McMANAMY. Do you think there is 40 per cent of that right of way that would be timberland?

A. Yes; I am inclined to think so. The work is rather heavy over in those Walker Mountains, and we would need additional land for borrow purposes, I think.

1775 Comr. McMANAMY. Now I was rather struck with your estimate for cinder pits here. Did you ever build a four thousand dollar cinder pit with a two-stall roundhouse?

A. I have never built a cinder pit, but we have built—the operating department has constructed cinder pits, and that is the figure they gave me.

Comr. McMANAMY. You don't know whether it was a dry pit or wet pit, or what?

A. I am inclined to think it was a wet pit.

Comr. McMANAMY. For a two-stall engine house is that the custom, or don't you know? I don't want to take you aside from your line of work.

A. No; I understand. I don't know just where the dry pit should be or the wet pit should be.

Comr. McMANAMY. Your estimate is about 2 per cent different from Mr. Buck's. That is well within the limit of variation which is allowed in the estimate of two different engineers for the same project, is it not? (3240.)

A. Yes; that is about as close a figure as you can get.

Comr. McMANAMY. Ordinarily it is about as close a figure as you can get?

A. Yes; ordinarily 5 per cent would be very close.

Comr. McMANAMY. That is all——

Exam. ROGERS. Did you say that 40 per cent of this was timberland for right of way?

A. I never——

Mr. DEY. Of the value.

Mr. SPENCER. Forty per cent of the value of the land, or just what did you mean anyway, Mr. Stacey?

1776 The WITNESS. I stated that on account of the work being heavier on the Walker Mountains, where the timber is, it would naturally require more right of way for the borrow pits than it would in other places where the work is lighter.

Comr. McMANAMY. I think perhaps I am responsible for that. His estimate shows clearing sage 1,320 acres and timber 845 acres. 845 acres is almost exactly 40 per cent of 1,320. That is where that figure came from.

Redirect examination:

For a 100-foot right of way it would take, I believe, 12.1 acres to the mile. I do not know how much Government right of way there is in there now. (3241.) There is considerable Government land traversed by this line.

Q. Now, you were asked several times about your traffic, as to how you happened to know about traffic as an engineer; now what is the fact as to whether or not in your duties you have been for years the confidential man of the executives, being sent out by them as an engineer and to estimate traffic and determine whether or not lines or locations were feasible?

A. I have been asked to make reports on certain areas without railroad transportation, to furnish an estimated cost of the line and

the physical characteristics of it; also what is being grown there, and what may be the future possibilities of the region, and an estimated amount of stuff that might reasonably be expected to be shipped out.

Q. And you were asked about the cost of ties, whether you would put in burnitized ties or creosoted ties; I don't know if it was put to you just that way; or why you put creosoted ties in. What has been the tie standard in construction previous to the last three or four years, or two or three years?

1777 A. Previous to that we used a zinc chloride process, the burnitized ties.

That is called a burnitized tie. (3242.) That is less expensive than the creosoted tie. The policy has been changed from the use of burnitized ties to creosoted ties. The present construction, this year's construction, is all creosoted ties. Experiments, I understand, have led them to believe that they can increase the life of a tie through the creosote process so much longer than the zinc chloride process, that it is a financial saving to them to use the creosoted tie.

Comr. McMANAMY. What you mean by that is over a 10-year period the creosoted tie would be cheaper?

A. Oh, yes; the life would be so much longer.

The comparative cost of creosoted ties on the line or on the grade ready to place, as compared with burnitized ties, is that there is approximately 35 cents per tie difference. The burnitized process would cost approximately 25 cents; the creosoted process would approximately cost 60 cents (3243); at that 35-cent difference. The cost of the green tie untreated delivered on our rail is $1.15. They are purchased, I understand, for about 90 or 95 cents; then the cost of handling them, hauling to the tie treating plant, handling them, and so on, makes up the difference.

The commissioner compared the small differences between my estimate and that of Mr. Buck's. As to how we happened to get so close together when we are so far apart on some of those unit prices, Mr. Buck used a full ballast section and I used a half ballast section.

I am familiar with the Harney Valley; I am not very familiar with the Blitzen.

1778 Q. Do you know the quality and extent of the lands tributary to the Rogerson-Wells line, generally known as the Twin Falls section, the North Twin Falls section, the extent of the acreage in there of reclaimed lands approximately?

A. The Twin Falls north and south side projects, Minidoka Government project adjoining, and the Twin Falls-Salmon River project, and the Goose Creek project, and one or two other (3244) small adjoining projects, approximate 700,000 acres of irrigated land, all of very good quality, with the exception of two small projects, with ample supply of water.

Q. Is there any such comparable area to support the proposed cross-State line as surveyed by the Public Service Commission?

A. Oh, no; certainly not.

Exam. ROGERS. I want to get a little clearer in my own mind about this 40 per cent of the line, which I understood you to say that this line would pass through; that is, 40 per cent of the line would pass through timber; is that right?

A. No; 40 per cent of the right of way would be in the timbered area.

Exam. ROGERS. Well, would that be equivalent to say that 40 per cent of the line would pass through timber?

A. Not necessarily.

Mr. SPENCER. Well, what is the effect in this case?

Exam. ROGERS. As I make it, that would make 74 miles of timber that this line would pass through.

The WITNESS. Where the work is fairly heavy and the fills are large, a great amount of borrow material must be had, which means that you have got to buy more right of way than 100
1779 feet. If you have a fill 15 or 20 feet high, and leave a perfect bern on that, there is practically no borrow land left on your right of way and you have got to buy additional right of (3245) way to get the material from to make the fill.

Comr. MCMANAMY. Now you show 1,320 acres sage, 845 acres of timber, a total of 2,165 acres for the right of way. At 12 acres per mile that would be 185 miles. Doesn't that account for all of your right of way?

A. Yes. But within that area are certain Government lands, of course, where right of way won't be purchased, but in certain privately owned areas.

Comr. MCMANAMY. This is for clearing?

A. Yes.

Comr. MCMANAMY. Under your clearing item?

A. Yes.

Exam. ROGERS. You have got clearing timber 40 per cent of the total?

A. Yes; on account of that wide right of way necessary in the timbered country.

Exam. ROGERS. Now, of the 185 miles how many running miles would be through timber?

A. Approximately 35, I think; between 30 and 35.

Exam. ROGERS. About 20 per cent?

A. There is that area from Odell up to Crescent Lake, of course, that has never been surveyed and we just have to estimate that distance.

Exam. ROGERS. Where does the timber lie, between what points? (3246.)

A. The timber begins about five or six miles west of Fort Rock.

1780 Mr. DEY. How far from the Great Northern's new line?

A. The edge of that timber is probably 20 miles. The farthest edge, from the Great Northern line.

Mr. DEY. You haven't figured buying any right of way over the Government land, have you?

A. Oh, no; that is not necessary.

Exam. ROGERS. This was clearing, Mr. Dey, we were talking about.

Mr. DEY. Oh, yes. That is all. (3247.)

E. C. MANSON was thereupon called as a witness on behalf of defendants, and, having been duly sworn, testified as follows:

Direct examination:

I reside at Pocatello, Idaho. I am superintendent of the Idaho division of the Oregon Short Line. That division contains 370 miles of main line, from Pocatella, Idaho, to Huntington, Oregon, and 930 miles of branch line in different parts, diverging from the main line. I have been on the Oregon Short Line Railroad 41 years. During the period of Federal control I was with the Railroad Administration at Washington and my duties were in connection with the office of Mr. Gray in handling different matters, in operating of the different roads. (3248.)

The so-called Oregon Eastern branch, owned by the Oregon-Washington Railroad & Navigation Company and operated for its account by the Oregon Short Line Railroad Company, extends from a connection with the main line of the Oregon Short Line Railroad Company about a mile east of the station of Ontario, and extends westerly through Harney County and along the Malheur Canyon, and thence through the Harney Valley to Burns, Oregon, a distance of 155.31 miles.

1781 The maintenance and operation of this railroad is and has been for many years last past in my charge. It was built first to Vale, the county seat of Harney County, in the year 1906; from Vale it was extended to Riverside in the year 1913; from Riverside it was extended to Crane in the year 1916, and from Crane to Burns it was extended in the year 1924.

Settlement and development of the country served by it (3249) has not taken place as hoped for, and it has been a losing venture from the start. It has, therefore, been necessary to operate the same in the most economical manner possible in order to keep the losses down as low as could be done and operate the property; and this policy has been consistently pursued both with respect to maintenance and to train operation.

The train service on the line has consisted and now consists of a mixed freight and passenger service, one train each way a day except Sunday.

The proposed railroad across the State of Oregon to Crescent Lake would spring from this Burns branch at a point 5 miles west of Crane and involve a construction of 185 miles.

In considering operation of the proposed line, Crane to Crescent, my testimony is based upon the traffic estimated by Mr. Lounsbury to be available to the line in the fifth year after its construction. I

have done this for the reason that it gives the maximum estimate of available traffic.

To determine the amount of gross tonnage to be moved we have taken the live tonnage given in Mr. Lounsbury's estimate moving into and out of each of the points specified, added to that the average weight of cars of the class required for the different commodities.

have utilized the empty cars made available from the inbound
1782 movement and figured on the movement (3250) of empties that it will be necessary to move into the territory to take care of the excess outbound loading.

The available tonnage, including the weight of cars in which the loads are moved and the empties into and out of the territory, is so small that the maximum amount of service that could possibly be considered would be daily except Sunday mixed train service; and to indicate this will state that as a result of our full utilization of the cars brought into the territory under load, with daily except Sunday service, we would have to move on the average each day the train ran as a maximum out of any one point 205 gross tons westbound out of milepost 250, and eastbound the maximum average would be 212 gross tons out of milepost 280.

To illustrate, would state that on the basis of this average a westbound train would leave Crane each day except Sunday with 72.9 gross tons; would leave milepost 133 with 140 gross tons; would leave milepost 150 with 146 gross tons; would leave milepost 180 with 147 gross tons; would leave milepost 230 with 181 gross tons; would leave milepost 250 with 201.9 gross tons; would leave milepost 280 with 181 gross tons, having that same tonnage into Crescent.

Eastbound on the average for each day except Sunday, the train would leave Crescent with 119.5 gross tons; would leave milepost 280 with 212 gross tons; would leave milepost 250 with 200 gross tons; would leave milepost 230 with 189.5 gross (3251) tons; would leave milepost 180 with 190.9 gross tons; would leave milepost 150 with 182 gross tons; would leave milepost 133 with 134 gross tons, and have that same tonnage into Crane.

1783 The mileposts referred to are the points designated in Mr. Lounsbury's traffic statement as the points to and from which he estimates traffic would move, no names having yet been designated for these proposed stations.

If the total tonnage for the fifth year, as estimated by Mr. Lounsbury, were available to be handled in full tonnage trains only 41.5 trains would be required to move the total traffic for the year.

The foregoing is a statement of the actual tonnage handled out of each loading point, but does not represent the average gross ton miles per train mile, which for this traffic and this service would average 167 gross ton miles per train mile.

The Oregon Short Line Railroad Company operates 1,527.16 miles of branch lines, and for the year 1927 the average gross tons per train mile on these branches was 469 tons per train mile.

In considering the train operation, the distance between Crane and Crescent is too great for a local train to cover within the hours of service. Therefore, it would be necessary to operate to an intermediate point half way between (3252) Crane and Crescent, which would require 4 crews and 4 engines daily except Sunday, and this operation would require certain terminal facilities at Crane, at Crescent, and at this intermediate terminal.

These gross ton mile figures do not take into consideration the passenger equipment. In view of the fact that there is not a town or settlement along this proposed line from Crane to Crescent
1784 Lake of 100 people on either side of the proposed railroad or at its proposed terminus at Crescent Lake, manifestly the operation of an exclusive passenger service is out of the question and mixed train service, carrying freight, passengers, mail and express, would be the service furnished.

The equipment for the passenger business would consist of a combination baggage, mail, and express car and a combination smoker and day coach.

At the present time dispatchers handling the main line between Glenns Ferry, Idaho, and Huntington, Oregon, a distance of 165 miles, also handle all branch line dispatching on the branches extending between these two main line points, and in doing so have reached the limit of the amount of this work that they can handle with safety. It will therefore be necessary to provide two additional dispatchers to handle this branch line operation, including the proposed branch to Crescent. (3253.)

Six new station layouts will be required, one of them to be at the intermediate terminal 95 miles from Crane, and another at the Crescent Lake terminal, and in addition 2 intermediate stations for each of the districts.

Six two-story combination freight and passenger station buildings will be required, the second story to be used as living quarters for the agent.

A one-wire pole line from Crane to Crescent, 190 miles, will be required; a two-stall engine house will be required at Crane with small auxiliary machine shop and other facilities such as heating plant, cinder pit, oil house, store house, sand house, coaling station, foreman's office, locker room, etc., and the necessary additional trackage and machinery.

The engine house crew at Crane will consist of a mechanical foreman, machinist helper, one roundhouse employee and one coach cleaner, and one carman.

1785 At the intermediate terminal a two-stall enginehouse will be required, a depressed cinder pit, a coal dock with power hoist, a combination building for oil house and engine supplies, and a sand house, dryer, and storage bin.

Two engine watchmen will be required at the intermediate terminal to take care of engines, clean, water, and fuel passenger equipment.

Trackage consisting of 2 passing tracks and a wye track will be required. (3254.)

The terminal at Crescent Lake will require a two-stall roundhouse, depressed cinder pit, combination building for oil and supply house, and a coaling station with power hoist; a wye track and necessary terminal yard tracks will also be required.

At Crescent Lake 2 engine watchmen will be required, and a man to protect inspection and interchange of cars with connecting railroads, also a carman.

The mileage between Crane and Crescent Lake would be divided into 14 sections, and each section would require a section crew of 5 men. This will make an average of 14 miles to the section as compared to 8 miles on the main line.

Necessary section houses, outbuildings and equipment for these section crews will, of course, be required, and water facilities at each section as well as at the intermediate terminal.

Facilities for watering engines will also be required at intervals of 20 miles.

The equipment for operation of this line, as set forth in exhibit prepared by Engineer Buck, is in my opinion necessary for its operation, and the prices stated in Mr. Buck's exhibit are the reasonable market prices prevailing at this time.

1786 The item of 80 freight cars in his estimate for equipment required for this line is based upon Mr. Lounsbury's statement (3255) of traffic which may be expected in the fifth year of operation.

The tonnage given by Mr. Lounsbury was divided by the average loading per car of the same class of traffic on the Oregon-Washington Railroad & Navigation Company, for the year 1927, which determined the number of loaded cars of freight that would be handled into and out of the branch.

An analysis was then made of these loaded cars to determine the number of empties which would have to be moved from one point to another, or moved from off the line onto the line, to provide empties for the outgoing loads.

The number of cars, loads, and empties so determined was then multiplied by the actual mileage such cars would make on the branch, with the result that it was found that in this fifth year of traffic we would have on the branch 374,463 loaded car-miles and 291,608 empty car-miles; a total of 666,071 car-miles on this proposed line.

Based upon the Oregon-Washington Railroad & Navigation Company, average of 23 car-miles per day, this mileage would represent 28,960 freight car days, and dividing this by the number of days in the year, 365, would indicate that for the movement solely on this line 80 freight cars should be provided.

This estimate is based upon the theory that this line must furnish its quota of the cars required for its business (3256), the connecting lines likewise furnishing their quota; and inasmuch as the prepond-

erant loading is in box cars we have used the average price for box cars, figuring that, while refrigerator cars cost more than box
1787 cars, flat cars cost less, and that the cost of the box cars would represent the fair or average cost of the equipment required for this traffic.

The average car-miles per day on the Oregon-Washington Railroad & Navigation Company is used for the reason that that line has very little bridge traffic, and inasmuch as there will be no substantial bridge traffic on this line it is proper to use the figures of the Oregon-Washington Railroad & Navigation Company.

If this proposed railroad were to produce substantial tonnage for movement over the existing railroad from Crane to Ontario, very considerable sums would be necessary to rehabilitate the line from Crane to Ontario. This would include ballasting, a large expense for additional tie renewals, strengthening wooden bridges of which there are 105 of from 1 to 12 spans, additional section crew service and other items, but we have eliminated consideration of same because it is apparent that the amount of tonnage to be developed by this railroad will not be substantial, and for this reason the maintenance expense not only of the proposed railroad but of the existing railroad from Crane to Ontario will be (3257) kept down to a figure substantially lower than the average cost of maintaining branch lines of the Oregon Short Line Railroad Company.

In this connection, however, it should not be contemplated that maintenance will not be a substantial and expensive item even from the beginning.

While a new line does not require expenditures to speak of for tie renewals, the expenditure for track maintenance and surfacing is substantially heavier upon a new line than upon an old line, and to a large extent this item offsets the saving resulting from lack of tie renewals.

1788 My conclusion in this regard is demonstrated by a tabulation of maintenance costs compiled for a line of railroad operated through a similar character of territory, owned and operated by Oregon-Washington Railroad & Navigation Company, between Ayer Junction and Spokane, Washington. This line from Ayer Junction to Spokane is 104 miles in length. Both are distinctly desert lines.

The tabulation shows by years the cost of maintenance in detail for 1915 to 1926, inclusive.

The line was opened in 1914. It is to be noted that for the first two years of operation, 1915 and 1916, the cost in round figures was $141,000 for the first year and $156,000 for the second year, while the cost in 1925 and 1926, respectively, was $157,000 and $153,000. The tabulation (3258) referred to is submitted herewith as exhibit.

This is the maintenance exhibit on the Spokane-Ayer line.

(Said statement was thereupon received in evidence, marked "Defendants' Exhibit 82, Witness Mason.")

The figures reflected by this statement are based on the present-day costs as actually incurred in the years 1925 and 1926, applied to the prior years for labor and material, thus making the showing for the various years truly comparative. As to whether the existing line from Ontario Junction to Burns would be considered a main-line railroad or the type of construction and maintenance of a main-line railroad, except the bridges that were built across the Malheur River, it is in no way comparable with main-line construction or suitable for main-line business. A main line of railroad is ballasted, has block signals, permanent bridges and openings, and pieces of double track, elimination of grades and of curvature, and is equipped
1789 with all modern appliances, such as switches that are not required to be (3259) opened and closed by hand, and electric switches, and different things of that kind, and that is done for the reason that we have a much higher grade of service and fast passenger trains that require a very high class of maintenance to keep it in shape for that kind of business, and that is followed by high-speed freight trains.

The main line that I have been talking about is the type of line maintained by the Oregon Short Line and the Oregon-Washington Railroad & Navigation Company through to Portland. Now, the Oregon Eastern is not comparable, because it is not ballasted at all in any way, and a great many of the bridges are wood construction. It has some 10-degree curves and some one per cent grades, and is not suitable for fast speed. That one per cent grade was injected into the line on the last extension that was built into Crane. The line crosses the Malheur River 28 or 29 times. We have a lot of high-grade steel bridges across the Malheur (3260), with concrete piers and abutments. The Malheur is not much of a river, except in the early spring, then it is quite a stream. It is rather wide and not very deep; frequently freezes to the bottom and we have a little trouble occasionally with the ice on that account. In the summer months it is used for a certain distance as a conveyor of water for irrigation. It never gets wild or out of the channel, or present any operating or maintenance difficulties, except in the early spring when the ice goes out; that is about the only time we have any trouble with it. There are no cloudbursts in that territory to any great extent.

We have a daily except Sunday mixed train service carrying what freight we happen to have and mail, baggage, express over the
1790 branch now into Burns. We leave Ontario at 10.30 in the morning, going up, and get into Burns at (3261) 7 in the evening—that would be 8 hours and 30 minutes; about 18 miles an hour. Down it is about the same. When I came to this line in 1887 it was a dirt railroad from one end to the other. It had small ties, untreated, 52-pound rail, and a very light business; wood bridges—we had but one steel bridge on the west end. The bridges to-day are all high-class steel bridges with concrete culverts or permanent structures of that kind. After crossing the Snake River at American

Falls to Tunupa—that is the second station west of Shoshone—a distance of close to 100 miles, we have no bridges at all.

The schedule time of what is known as the Rieth fruit trains or blocks—and they run every day in the year—is 24 hours from the arrival time at Huntington to the arrival time at Pocatello. (3262.) Now, that is the gross, not the net time—and from that the Idaho division that I operate must absorb all delays. As an example, if the train goes into Huntington with bad orders or hot boxes, or any other work in switching, the Idaho division absorbs the delays in the running time.

Now, on silk trains the speed per hour varies. I would say a fair average would be 20 miles. Of course, to go right through with them, there would be spots you have to run a great deal faster, of course. We have no speed limits on freight trains on the Idaho division. We have certain engines that we have a slight speed restriction on, but 45 miles an hour is not at all unusual and is permissible.

The number of cars ordinarily in a fruit block varies. Speaking strictly of fruit, we take any number of cars of fruit that is de-
1791 livered from one up and fill out with other freight, and we run a little light on tonnage. For instance, the published tonnage is 3,300 from Huntington east. Now, we let that train out, say, from 200 to 250 tons light; a little lighter on that than what we call drag tonnage. (3263.)

The number of cars of perishables we would ordinarily have depends on the season of the year—it varies so. From right now, beginning with the fruit season, moving east, apples and one thing and another, it would go from 25 to 30 cars. It depends a good deal on the condition.

As to how many cars, say, in that train to make up the 3,300, it will run 65 to 75, possibly a little more than that. It depends altogether on the weight, you know. Refrigerators, if you had a lot of them, their capacity is lower than the straight box car or freight car.

This 20 or 30 would be the peak movement from the Oregon-Washington Railroad & Navigation Company, but we develop a lot of fruit along the Oregon Short Line that is accumulated at Nampa, just the same as they accumulate them at Rieth and run them from Rieth east—the same way at Nampa.

We have extensive icing facilities at Nampa; we can spot 110 cars at one time.

As to the number of cars we have in these fruit blocks when they (3264) arrive at Pocatello—from Minidoka east, we fill out and we pull into Pocatello 4,000 tons.

Q. I know, but you are still not answering the question. How many fruit or vegetable cars—I mean, how many of these P. F. E. cars do you have in a train when you come into Pocatello, if you have got practically a full load as obtains in that country?

A. We can haul as many as 75 loaded refrigerators into Pocatello.

1792 Q. What do you get—the examiner asked you the maximum—whether 35 cars in that fruit block train was the maximum, as I understood the question. Is it or isn't it?

A. Well, no; it isn't the maximum. It depends altogether on the movement. Now, we may receive, say, 30 cars at Huntington from the O.-W. and we may pick up at Nampa 10 or 15 or 20 or 30. Now, out of Nampa—maybe I can make this a little clearer. You see, on account of our grades it varies. From Nampa east, from Nampa to Glenns Ferry we can pull 4,000 tons of anything, fruit or anything else. East of Glenns Ferry we reduce to 3,300 tons because of the grade out of Glenns Ferry. (3265.)

Comr. McMANAMY. Do you use a helper out of Glenns Ferry?

A. No, sir; out of King Hill, which is just east of Glenns Ferry, and that goes up to the top of the hill to Ticeska, and then from Ticeska east we can take the 3,300 tons into Shoshone; and from Shoshone east 107 miles into Pocatello we can take the 4,000 tons. Maybe I can make it a little plainer. You see, in running this fruit train we try to pick up in lots anything that is ready to move from Nampa that can be put on by switch engines, or anything that is ready to move from the Minidoka district, the south side branch and the north side branch, in order to deliver as near as we can a full train of fruit or perishables in that Rieth fruit block or the Nampa fruit block, as the case may be.

In reference to the speed we make with the silk train that is not what would be the maximum speed we make on the line—my running time for arrival at Huntington to arrival at Pocatello is 6 hours, 56 minutes. Now, I must absorb all delays, including

1793 everything that occurs at Huntington, and the speed on that train is very fast. Oh, we will make 70 miles an hour, that is nothing uncommon. In that distance we make just three stops for water. Our rules permit 70 miles an hour, but the average would not be 70 miles an hour; there are spots that you must run that in order to make your time and recover what you lose naturally in stops. It is all right for our engine crews to run 70 miles where they have to. We absolutely could not make any such service as that on a cross-State line down the Malheur Canyon, with the tonnage they have been talking about diverting to that line. (3267.) That road isn't built for any such speed, or anything of that sort.

I operate the Twin Falls branch. Why they don't use it more is rather a hard question to answer. They just simply don't use it. We have a good service, and we are willing to add more service as the business comes to it. It isn't what we hoped for, because we hoped for more. We furnish the service now and make all the connections, and make good connections for both freight and passenger at Twin Falls, but they don't seem to take that line.

Q. Well, do you furnish special service for shipments of livestock or anything of that kind, off of that line?

A. We do. We treat it just the same as the main line, as far as stock specials are concerned.

Q. What is that treatment?

A. Twenty cars or more.

Q. Well, does the character of your railroad through on to the East, in your opinion, have anything to do with the traffic going that way? Can you give better service, even, when the distance is taken into consideration, via Pocatello and Ogden, than you can via Wells?

1794 A. Well, if I was a shipper going to California I would ship (3268) via Wells, for the reason that the service is good, and it surely saves time; it saves the time and it saves the distance. You see, there's two ways to go into that Twin Falls country—you can go in via Bliss, don't have to go in through Minidoka at all—or you can go on down the main line as far as Minidoka and then across to Twin Falls.

Exam. ROGERS. Then in order to use it would you have to figure on which day the train is going to run?

A. Well, we would at the present time, Mr. Commissioner, for the reason that we run tri-weekly, simply because we have no other service, but if we had the business to handle we could handle the business if it was necessary.

Exam. ROGERS. I thought you said if you were a shipper you would use it.

A. Well, I would use it, that is true, because it is shorter, surely.

Exam. ROGERS. Would you use it and figure on which day the train was going to run?

A. Well, yes; that is what we have to do. We do that now with our stock specials and their trains.

Comr. MCMANAMY. Do you think the method of handling stock at (3269) terminals has anything to do with the failure to use that branch? What I refer to, Minidoka isn't a terminal for your line, is it?

A. No, sir; just simply a branch terminal for the south side and north side branches.

Comr. MCMANAMY. Stock would come in there on the main line and be set out there by switch engine, if you have one there, or by the local engine, or by the road engine?

A. Yes, sir. And then would move down to Twin Falls on
1795 a local freight train making all stops, but making the connection at Twin Falls for Wells, if they have stock. And at Twin Falls the train would be switched again and the stock would move down to Wells, but the branch train is usually made up ready to go, and all that is necessary is to put the stock from the incoming train on the outgoing train, about all there is to it. We have a switch engine at Twin Falls. (3270.) We have a mixed train from Twin Falls to Wells making all stops—mixed train service. The rate of speed is a little better than 16 miles an hour.

We turn from the east and west main line of the Oregon Short Line at McCammon, to go south to Ogden. That is 23 miles east

of Pocatello, and although that isn't a terminal it is simply a junction point, Pocatello being the terminal for both ends, the east end and the south end, but McCammon is the diverging point for the south. That is double-tracked between Pocatello and McCammon. We have other double-track between Pocatello and Huntington. The first stretch is from Pocatello to Michaud, 9 miles. The next stretch is from Minidoka to Dietrich, in spots; there are about 14 miles in there, and that was (3271) done when we reduced the grade to a five-tenths. We built the new line and took out the sags, brought it up to a five-tenths, and left the old main line as the secondary track.

The next stretch is from Dietrich to Shoshone; that is eight miles, in round figures.

Then the next is from King Hill to Reverse—that is about 26 or 27 miles—and we have right now in course of construction from Ticeska to King Hill to connect up that portion, and that is a little better than ten miles, and will be completed in about November, and that was done in order to get away from our two leading and
1796 ruling grades on the Idaho division, Glenn's Ferry being in a depression, and we rise both ways out of Glenn's Ferry. That isn't all—the next double-track is from Orchard to Nampa. That is 45 miles. We have none west of Nampa.

We have a great many long passing tracks, our standard being 5,500 feet, which will clear ordinarily 110 cars and an engine and a caboose, but we find they are too short. The length of trains is increasing all the time, our usual run being 125 cars. We have pulled in one instance as much as 154 cars, but it isn't economical with the present sidings, simply because sawing-by and the delays incident thereto (3272) doesn't do. 125 we can get by very easy. We have some lap sidings, and we can double over, in other places. On the main line the sidings will average between four and five miles apart.

Q. Now, I wish you would explain this livestock operation. It has been mentioned here that this livestock from these southwestern Idaho counties might go via the cross-State line. What is your opinion as to that, in view of the difference in the service, if there is any difference? Just explain that.

A. We have an agreement, or, rather, an arrangement with the stock shippers of Idaho and Oregon that we run a special stock loading train out of Glenn's Ferry the early morning of each and every Friday; whether we have one car or a hundred cars or no cars, the train is run. We run it out of Glenn's Ferry, for the reason that that is the division point and there is where our crews and engines are available. That train passes Nampa about two o'clock in the afternoon and picks up anything that may come in from the Murphy branch, or anything that is loaded in the vicinity of Nampa; then to Caldwell, where we have a very large feeding yard pri-
1797 vately owned by Mr. Smeed, one of the former witnesses; and it also takes care of the Wilder branch—there is some stock off of that branch comes into Caldwell, 11 miles long. And

(3273) then the next is Nyssa, for the Homedale branch, Ontario for the Oregon Eastern, and that is about all they catch, unless they should catch two or three cars from the "Pin" road at Weiser, a privately owned road, and their service is rather irregular and they may have some stock or they may not.

Well, now, that particular train runs through intact to Portland without feed. Occasionally there is a car or two, or maybe four or five cars, from Glenn's Ferry that may come in from the East from one of the branches over in that district that would have to unload and feed at Huntington.

Then we run a second train that handles all stock loaded at points east of Glenn's Ferry. For instance, off of the Twin Falls north side they come in at Bliss, or the Wood River branch, that comes in at Shoshone, the Hill City branch, which comes in at Shoshone, or the south side branch, which occasionally we have some hogs from Buhl and different points. Now, that stuff is all—and then we might catch something from the Montana division at Pocatello—that stuff is all handled west on a second train, run into Huntington, and run into Portland, so as to reach here Sunday evening.

Now, that is very good service, when you can load stock up as late as noon and be in Portland the next day without feed or without unloading. It is far better service than you could hope for by a branch line where you have two or three transfers to make. (3274.)

Q. Well, you heard the testimony in this case of the gentlemen who testified from southern Idaho—I think there was
1798 one shipper among the witnesses who was called—but you have been handling this livestock for forty years, have you not?

A. Yes, sir.

Q. And would you say that—how would the service compare if you undertook to divert this business, part of it, across the cross-State line, and a part of it via Huntington?

A. Well, now, I am just taking the service we have to-day. A shipment would be, we will say, Ontario, just to start at the end of the Oregon Eastern, and it would move into Crane, about—the train is due there now at 5.30 in the evening, and we can't better that any for connections that we have to make; and it will leave Crane, we will say, at 6.30 or 7 o'clock in the evening, and they must run 190 miles—figuring the five miles that they run over the present Crane branch, 185. Well, they would probably be 12 to 14 hours, maybe more, going from Crane to Crescent Lake, and that would be pretty fair time for that distance, and then they are transferred to the Southern Pacific and into Portland. Now, I would say off hand that would take not less than three days, including your feed—two and a half to three days—that would be my judgment on it, while the other way you come direct in 36 hours without a feed or unloading. (3275.)

Q. Well, let's come the other way—you start at Crane, you say—pick out some shipping point where livestock is shipped on that Oregon Eastern branch, near Burns, or at Burns.

A. And go around over the other line?

Q. Yes. Burns will be on a stub; won't it?

A. Yes; we do ship—there is considerable stock shipped from Burns, or has been, and that stock, were it coming to California by the proposed line, would leave Burns at 7.30 a. m., and we base that figure on our present service because of certain connec-
1799 tions we must make at Ontario for the east and west at 7.30 in the morning. There will be a train about 9 o'clock. A train is due there at 9.15, but about 9 o'clock. I give an hour there. Leave there about 10 o'clock in the morning. This is from Burns, in the morning. Now, then, it would depend altogether what our schedule would be across that 190 miles, but I figure it would take them just about as long to go from Burns around here as it would be from Ontario—very little difference.

Exam. ROGERS. Mr. Manson, have you given any consideration to what the construction cost or operating cost the train (3276) service would be across this proposed line if Mr. Newell's recommendation were carried out?

A. No, sir; I didn't. I didn't study Mr. Newell's exhibit at all, but I am just figuring from what our actual practice is to-day on branches that I have charge of.

As to the character of construction from Crane to Burns, whether it is an expensive or inexpensive piece of construction, I wouldn't say it was very expensive construction for this reason—they didn't encounter any rock at all. It is right on a flat, it is meadowland, you know, and in building the grade they weren't very liberal. We have parts of that road that is under water in the early spring when they flood their meadows. I am speaking so that my railroad friends here will understand it. It is almost impassable at certain seasons of the early spring. To give an example, we had an engine standing still on a side track in that flooded district that turned over of its own weight. That was on the Oregon Eastern. But the country is boggy. They flood it in the early spring, and they use the borrow pits—the only place—as irrigating ditches. We are soaked right up to the handle; it is just under water from one end to the other. (3277.)

1800 Mr. SPENCER. It is just a grade thrown up there across that meadow bottom—it has got to be reconstructed or strengthened if you have any traffic over it, is that it?

A. Well, maybe this will explain it. I made a trip over that line within the last—just before I came up here, the last trip I made, and it was so blamed bad that I was a little alarmed over it and I wired our people for authority to put men on there and put in a steam shovel to get material out so as to fix the thing so it was safe to get over it. Now, mind you, this was only between Burns and Crane, and near the Burns end of the line.

Comr. MCMANAMY. That wouldn't be on the cross-State line?

A. No, sir. No, it isn't on the cross-State line where this particular thing occurs. It is about 15 miles this side of Burns, into

Burns, and they just use the borrow pit by putting the ditch across it, throwing the water into the meadows and right over the track and onto the track.

Q. (By Mr. SPENCER.) Don't you think you have been spoiled over there on that main line you have got between Huntington and Pocatello?

A. Well, I am rather proud of that main line. It will do anything.

Q. Is there a large expenditure confronting you to undertake to duplicate anything like it for service and efficiency across the State? (3278.)

A. Yes, sir; there is no question about that. The line from Crane to Ontario would simply have to be rebuilt in this way. You see, we have so many 10-degree curves. In fact, it is just through one canyon after the other, and considerable grade, and you simply can't make speed on a line like that, it wouldn't make any difference how good the surface is; it is the other complications that come in.

1801 We have some equipment we plan for the cross-State line. I gave that equipment cost to Mr. Stacey or Mr. Buck, the estimate, motive power and equipment for the cross-State line. The kind of a locomotive we will use there is what is known as the Consolidation freight engine, for the reason the Oregon Short Line doesn't own a smaller freight engine than that particular class. As to whether we have got any of them that we can use and assign to that line, or whether we have got to buy some, we are short of that class of equipment right now and we are using that class of engine on the present Oregon Eastern, and we would have to use the same thing on the other line. Now, we can't even use a "Mike" or a Mikado engine on the Oregon Eastern, on account of the wood bridges, couldn't use them at all. The heaviest engine (3279) we can run up there is the Consolidation.

Exam. Rogers. What difference does it make, where you have got the line, whether you use the lightest engine you have got now? What does that have to do with it?

A. Well, I was just answering the question. We would have to use a Consolidation engine there, for this reason: There is no use of buying a big modern engine, say, for instance, like what the O.-W. are now receiving—those engines cost $112,000.00, and with certain improvements and additions as high as $127,000.00——

Comr. MCMANAMY. What engines are those?

A. These big 9,000's they are just receiving now.

Comr. MCMANAMY. Using them on the Oregon-Washington Railroad & Navigation Company?

A. They are just receiving eight of them, I think it is, six or eight.

Comr. MCMANAMY. What do the Mikados cost?

1802 A. A Mikado will run around, I would say, offhand—depend altogether on just what you want, whether it has a

booster and a Worthington heater, and one thing and another—but I would say, using to-day's prices, $52,000 to $55,000.

Comr. McMANAMY. And the Consolidations would run substantially less?

A. Yes; about, I would say, in round figures, around $40,000. Now, as I was saying, if you buy these big engines for the main (3280) line with the hope of transferring some of these other smaller engines, like the Consolidations, for the branch lines, you can't do that very well, because you haven't enough of the Consolidations to fit your branches, and you can't use the larger engines like the Mikado, which is the next heaviest engine we own.

The lightest engine we have is the Consolidation, then comes the Mikado, and we have so many restrictions on our branch lines we can't use Mikados.

Exam. ROGERS. The reason I asked the question, I didn't think that there was a large railroad in the country anywhere that didn't have planty of obsolete light engines that would be fit to perform the service which you say you would give across there in freight train service.

A. Well, Mr. Examiner, maybe I can explain that. Now, that isn't true with the Union Pacific system, and I say that for this reason: We recently retired a number of small obsolete engines. For instance, this year we retired some that were purchased in 1890. Now, we can't get the repair parts, and it would cost too much to renew the fire box and different things, and they are just obsolete; we just retired them. Now, then, the next thing you have is Consolidation.

1803 Comr. McMANAMY. You build fire boxes in your own shops (3281), don't you?

A. Yes, sir—well, no; not altogether, Mr. Commissioner. It is this way: We buy, say, six, and then cut out and put in one of the six that we have bought, but I don't think that we build complete any fire boxes for our modern engines, the modern plan being to purchase about six and then interchange them; you know, repair them.

Comr. McMANAMY. You mean purchase six back ends?

A. Yes, sir.

With respect to the kind of cinder pits I estimated were required there at the two termini, Crane and Crescent Lake, and at the intermediate terminal, we use reinforced concrete pits, as a rule, and they are all equipped with water, for the reason that we use all of our cinders for ballasting our branches and for different repairs in and around yards and surface tracks, industry tracks, and things of that sort, and all of our pits are equipped with water, for the reason that we don't put hot cinders in the equipments, simply because it ruins the equipment, to say nothing of burning out your ties if you unload them hot. That would include pits at such

points as Twin Falls, Brigham, Idaho Falls; at our terminal at Buhl we have a pit of that sort; at Shoshone we have one. (3282.)

The estimate for those cinder pits, as I recall it, was $4,000. That isn't far from wrong.

Q. Well, have you an estimate for equipment and for the maintenance and operation of that line in the way of passing tracks and section gangs and station houses, and appurtenant facilities as could be made for any kind of an operation?

1804 A. Yes, sir; we figured this on the lowest minimum. Now, if we are to receive anything like the business that has been mentioned here, of course we have not to go into a more elaborate system of buildings and more sidings and more telegraph offices and a little better shop facilities, more of them. For instance, instead of having the two-stall houses, it probably might require a four-stall house or six-stall house—it will depend altogether on what business is developed, but modern practice is to start at the low ebb and build up. (3283.)

Q. That doesn't obtain in the chambers of commerce—you are talking about railroads.

A. Yes, sir; absolutely.

1805 Cross-examination:

I have examined the estimates of costs of Mr. Stacey and Mr. Buck of this cross-State line. I didn't say that I had figured the cost of this cross-State line on the lowest minimum. We were referring to the equipment and the buildings and the sidings, and things of that sort, not the construction of the line. When I said I figured the cost of the equipment I think I included in that the locomotives and the freight equipment; and I think we included one ditcher, and possibly a rotary snowplow, simply because the snow at the west end is reported to be such that we must have a rotary plow to operate. (3284.)

As to how, from the standpoint of operation, the line west of Crane to Crescent Lake and standard of construction would compare with the present Oregon Eastern branch between Crane and Ontario, well, the construction would be on a branch-line basis, rather a good branch line. Now, we use on the present line rail varying in weight from 70 as a minimum to 90 as a maximum. It is mixed from 70 to 75, 80, 85, and 90. Then on the proposed line I would say offhand that they would lay 90-pound rail with the usual number of ties. We use treated ties entirely, you know, on all branch lines, the same as we do on main lines.

Q. I was asking, however, how the line as estimated by Mr. Stacey, from the standpoint of standard of construction, would compare, if constructed in that manner with the existing line from Crane to Ontario?

A. I would say it would be about the same as that line, as far as the construction part of it is concerned. It might not have as many bridges, but the general construction would be about the same.

I would say that the line from Crane to Ontario is now entirely without ballast. That would be true of the line from
1806 Crane to Crescent Lake (3285) if it were built on a branch line proposition.

I heard Mr. Stacey's testimony and Mr. Buck's testimony.

Q. I got the decided impression from the testimony of both those witnesses that the Oregon Eastern Railway back in 1905 and 1906 was planned and located and intended to be constructed to form a new through route across the State for the movement of traffic between western Oregon and eastern territories, to relieve the excessive tonnage that at that time was moving over the Columbia River route to Portland, and that their estimates of the cost of the line from Crane to Cresent Lake had been made on the basis of constructing such a line, if built at the present time, in accordance with the plans that were made back in 1905 and 1906. Was that your understanding of——

A. Well, no; I don't believe I understood it just that way. Now as I understood them to say, that they had figured on some ballast on this line, but not a full ballasted line. Maybe I have got it wrong, but that is my understanding of it. There is quite a difference between a surface of ballast, you know, and a complete ballast section of track. (3286.)

I would agree, then, with the testimony given by Mr. Buck, that if this line from Crane to Cresent Lake were built in accordance with his estimates and up to the standard that his estimates contemplated, it would be necessary to do quite extensive rehabilitation work on the Oregon Eastern branch between Crane and Ontario to bring it up to the standard of the rest of the line over to Cresent Lake, and that is for this reason—even over the territory mentioned the curvature isn't anything near as heavy as it is on the other line, nothing like it—in other words, from Crane to Cresent Lake, and from Crane to Ontario, there is quite a difference in the grades.

As to whether with respect to grades and curvature, we have any more adverse conditions between Crane and Ontario than we
1807 have in crossing the Blue Mountains between Huntington and Pendleton, or Huntington and La Grande, well, of course, I have never worked as an operating official on the Oregon-Washington Railroad & Navigation Company in this particular territory you name; but I think their grades are heavier than we have on the Oregon Eastern that I operate. The curves on the Oregon Eastern between Crane and Ontario are greater than on the Oregon-Washington Railroad & Navigation Company Blue Mountain line. We have some 10-degree curves, and the main line of the O.-W. (3287) I don't think has anything that severe. There are quite a lot of 10-degree curves on the Oregon Eastern between Crane and Ontario. I can tell exactly, though. From milepost 31 to milepost 40—that is through the canyon; from milepost 103 to 123.

I have in mind the following reasons for saying that if this cross-State line were built it would be impossible to operate the char-

acter of freight train service over it that now moves between Portland and Huntington on the Columbia River line, or between Huntington and Pocatello on the Oregon Short Line. The main line is put up for fast speed—that is why it was built as well as it was—while a branch line such as the Oregon Eastern as it now exists, with its heavy curvature and no ballast and second-hand rail, and one thing and another, tunnels, cannot stand the speed that we would naturally give the main line. The speed must be considerably lower. We can handle the same kind of freight, but not as quickly or as economically as we can on the main line. I cannot translate that comparison of the speed across the cross-State line and the Columbia River line of the Oregon-Washington Railroad & Navigation Company into (3288) figures so that we could have some more definite basis of comparison. As I said, I never worked for the Oregon-Washington Railroad & Navigation Company as an operating
1808 official, on this part of it. I don't know, then, what speed the O.-W. R. & N. Co., from Portland to Huntington, would make in handling either lumber or perishables, such as fruit, or broccoli, or celery, or things that move under ice in refrigerator cars. I don't know what their speed schedules are. I was comparing the speed of service possible over the cross-State line with the conditions as I know them on the Oregon Short Line. I would say, offhand, that 30 hours would be our schedule on the Oregon Short Line between Huntington and Pocatello for freight trains that carry lumber. (3289.) Now, you know, we move a great deal of this lumber in those Rieth fruit blocks. (3290.) We don't move all our lumber in the fruit blocks, but a great deal of it.

The distance the short way between Huntington and Pocatello is 327 miles. The short way is the way the freight moves.

Q. Well, that would be at the rate, in your lumber trains between Huntington and Pocatello, of 10 miles an hour. Now is it your testimony that a freight train service that would take lumber from western Oregon across the State over the route of the proposed cross-State line to Crane could not be maintained with safety at an average speed of 10 miles an hour?

A. They probably would make the 10 miles an hour, but that is not all that enters into it. We must not overlook the fact that this freight that is moving on the cross-State line is moving in a mixed train service, or, rather, a local service. That moves much more slowly than does a main line freight train that does not make stops except for water or something of that sort.

Q. Suppose that the traffic offered for shipment or routed for shipment over the cross-State line was sufficient to require more than mixed train service, would you say that lumber then (3291) could not be transported across the State via that route at substantially the same average speed as it can move and does move
1809 between Huntington and Pocatello?

A. It would probably make 10 miles an hour while moving; that is true.

Q. In your judgment, what would be the maximum speed that could be made with safety over the proposed cross-State line between Crescent Lake and Ontario, if constructed in accordance with the standards of estimate given by Mr. Buck?

A. Our speed restriction on the Oregon Eastern as of to-day is 20 miles an hour.

Q. Yes; but then I didn't mean that. Mr. Buck testified he made estimates of the cost based on a standard high class line—I think those were the words he used—fully ballasted. Now, if a line were constructed in accordance with those standards, what would you say the maximum speed limit on that line might be made with safety?

A. Taking it, using it on your own language on it, high grade ballasted line from Crescent Lake to Crane, and the Oregon Eastern from Crane to Ontario put in shape for such business——

Q. No; just to Crane.

A. Just to Crane, there is no reason why we should not make as good time on the line from Crescent Lake to Crane as we do from Huntington to Pocatello, with the same kind of a railroad, built in the same way. (3292.)

Q. Well, with the kind of a railroad that Mr. Buck described.

A. That is what he described.

Q. Yes; all right. Now, would you say——

Exam. ROGERS. Well, wait just a minute. I am not sure that Mr. Manson knows what sort of a railroad Mr. Buck did describe.

Mr. MCCULLOCH. Well, I asked him if he had not heard his testimony, and he said, yes.

The WITNESS. Yes; I heard his testimony.

1810 Exam. ROGERS. But you understood that was a line without ballast?

The WITNESS. Well, that is the way I understood Mr. Buck. I didn't understand that he was going to build a high grade, standard embankment and standard-ballast railroad between Crane and Burns, or between Crane and Crescent Lake.

Exam. ROGERS. Mr. Buck has got 474,000 cubic yards of ballast. Does that sound like a road without ballast?

A. No, no; that would be surfacing ballast all right.

Exam. ROGERS. So you didn't understand Mr. Buck's construction?

A. No. That would be quite similar to the line from Rogerson to Wells.

Q. (By Mr. MCCULLOCH.) But my question contemplated that the line from Burns to Crescent Lake, as estimated by Mr. Buck, would be ballasted, and you were answering it on that assumption? (3293.)

A. Oh, yes; on that assumption. I answered your question as you put it to me.

It is true there would have to be considerable rehabilitation to bring the line from Ontario to Crane up to the standard estimated by Mr. Buck for the line west of Crane to Crescent Lake.

Q. And after that rehabilitation had been made and it had been brought up to the standard of the line west, then would there be any reason why you could not maintain a considerably higher speed limit than 20 miles an hour, which is your limit now on the portion of the line between Crane and Ontario?

A. If the line was constructed just as you state, and if the line from Crane to Crescent Lake was first class and ballasted, as you state, then the time could be increased.

Exam. ROGERS. Mr. Manson, I am wondering if this is true with respect to this train service across this line; and that is that
1811 the train service that you would give across there, if the line were built, would depend upon the traffic that there is to move across the line?

A. Absolutely.

Exam. ROGERS. If the traffic to move across the line (3294) equaled the traffic that now moves on your main line, you would have service across there equal to your main line?

A. Yes; that is right.

Exam. ROGERS. And, on the other hand, if the traffic that moves now over what is your main line was no more than you expect from this cross-State line, you would probably have the same service on your main line as you expect to give over the cross-State line, wouldn't you?

A. You mean the same train service?

Exam. ROGERS. If you had no more traffic on your main line than you expect off of the cross-State line, I say you would probably have the same train service on your main line that you anticipate giving on your cross-State line?

A. That is it exactly. I misunderstood the question. It would be just the same. In other words, if we had no freight on the main line we would have to drop back to a mixed train service on the main line, as we once had when we were quite young, just the same as we would on the Oregon Eastern extension from Crane to Crescent Lake.

Exam. ROGERS. And if the traffic develops on the cross-State line, if built, to a point where it is equal to the main line, you will have main line service?

A. We would have, exactly. We would furnish service to handle the business, the same as we do on the main line.

Exam. ROGERS. Isn't that what all this talk about train (3295) service amounts to?

1812 A. Well, from my viewpoint, yes; that is what it is. If we built a high-class railroad to handle any kind of business, we would handle it the same as we do anything else, if the business is there to be handled.

Q. (By Mr. MCCULLOCH.): Was the line from Crane to Burns built according to a standard of construction, and in the way that you have described, sufficiently good in your judgment from an operating standpoint to take care of all the traffic that it was ex-

pected would move over that line? And in saying that, I have in mind particularly the 10 cars of lumber a day that it was anticipated would move from Burns from Herrick's new mill.

A. Well, you understand the O.-W. R. & N., as I understand it, did not build that line from Crane to Burns.

It was built independently and acquired subsequently—that is my understanding of it. It is operated in my division. It was built by contract by the Morrison-Knudsen Company. Since I have operated it, some work has been done toward rehabilitating or improving the character of construction on that branch, in this way: We have unloaded a great many cars of cinders in the worst spots and have used other surfacing (3296) materials as could be got handy to take care of some of their worst wet spots. In its present condition it would certainly be suitable for the movement of 10 cars of lumber a day from Burns to Ontario.

Q. Now, is the traffic from southwestern Idaho destined to California via the Rogerson-Wells branch, routed through Minidoka? That is, is it handled through Minidoka as an operating proposition if it is unrouted or it is simply the Wells gateway that is indicated?

A. Well, if it is going to California over the Rogerson cut-off, as we call it, and so routed, we take it, set it out at Minidoka and take it south from there, or west.

1813 Q. Is that a longer route than the route through Bliss and Rupert?

A. There is a difference of, oh, not over 13 miles. It is just a very little difference in favor of Rupert.

Exam. ROGERS. That answer did not answer your question there, Mr. McCulloch—I would like to have it answered. Suppose that you got traffic now from, say Boise, going to San Francisco, and it is unrouted; the shipper does not say anything about routing—do you take it by the Rogerson cut-off or do you take it around by Ogden? (3297.)

A. Well, I can't say as to that. I am not sure just which way it does go. If it was unrouted and was moving to California we would doubtless move it by way of Minidoka and Wells. There is so very little of it that it might go the other way. It is a hard question to answer. (3298.) I never heard it asked before it came up here. The great bulk of it, I would say, is routed by the shipper.

Exam. ROGERS. Mr. Manson, I have been wondering how that situation on the Rogerson cut-off is ever going to change. As I understand it, the carrier said when the shippers route enough that way, why, they will put the train service on there to take care of it properly, and the shippers, as I understand it here, say that they won't use it because the train service is not there. I don't know how it is ever going to change unless you have a cloudburst of traffic at some time and have it start.

The WITNESS. Mr. Examiner, I will guarantee you this: (3299) If they will give us the business we will put on the train service.

Exam. ROGERS. Well, somebody has got to start first, haven't they? You are going to have to give them the train service first, or they are going to have to route the traffic first, one or the other?

1814 A. That is true.

Comr. MCMANAMY. Do you know anything about the train service you get out of Wells?

A. Yes, sir. We have an arrangement with the Southern Pacific. We have, of course, regular interchange tracks there and should we have perishables or livestock, or anything of that sort for the west, we notify the Southern Pacific at Ogden and they invariably have a connection either there, or close, to take it.

Comr. MCMANAMY. Wells is not a division point on the southern Pacific?

A. No, sir; it is not.

Comr. MCMANAMY. Do you think this has anything to do with the failure to use it, that is, that the Oregon Short Line traffic leaves the main line at a branch line junction point and it passes through about two such branch line junction points and is picked up by the Southern Pacific at another branch line junction point?

A. Yes. (3300.)

Comr. MCMANAMY. Would that service in ordinary railroad practice compare with the service rendered on your main line from Minidoka down to Ogden, considering that the traffic approaching Minidoka was in one of your through trains?

A. A shipment of that sort moving into Minidoka and from Minidoka to Twin Falls and to Wells, can make it quicker if it is loaded and moved on the day we are advertised to run than it can by going from Minidoka on to Pocatella and south.

Comr. MCMANAMY. How about the switching and handling at the various junctions?

A. Well, the main line train would set out the car on the branch receiving track. We have a switch engine there that makes it

1815 up into a train for Twin Falls and Buhl, and the switching engine at Twin Falls, to cut the cars into the outgoing train.

Comr. MCMANAMY. Is there a switch engine at Wells?

A. At Wells; no, sir. We put it in on the transfer before they put up the passenger station.

Q. (By Mr. MCCULLOCH.) Mr. Manson, I understood you to say there would be no substantial bridge traffic on the cross-State line if built. Was that your view?

A. I don't think I made any such statement.

Q. I made notes, and I thought you said that exactly.

A. Possibly I did, but I don't recall it.

Q. Well, is that your view, that if the cross-State line were (3301) built it would not be used to any appreciable extent for the movement of bridge traffic, or as a bridge line?

A. Well, I don't know about that.

Q. Well, I understood you to express an opinion. That is the only reason I asked you.

A. No; I don't think I did. I don't recall it.

With reference to my comparison of maintenance costs on the Spokane-Ayer section of the O.-W. lines, I took that particular section of line to make my comparison because it is much similar country to the proposed new line. It is my understanding that the type of line would be similar in all respects and the character and amount of traffic be similar. There may be more business, of course. It is hard to tell what business will be on the other line. We took it because they are both desert lines, you know. That was the reason for it. (3302.)

Maintenance depends to a certain degree on the amount of traffic handled. Still, you have got to keep your road in a good passable condition at all times. But it is true a great deal of the maintenance expense varies with the amount of traffic carried on the line.

1816 Q. Then, would you think it would be fair to use as a comparison a main line with main line traffic, when you are determining what you say would be maintenance costs on a branch line with light traffic?

A. Well, as I undestand it, this is not going to be a branch line; it is going to be a pretty good railroad and about the same kind of a railroad as the O.-W. have in this territory.

Q. And the same amount of traffic?

A. Well, as to the traffic, that is pretty hard to answer, because nobody knows what we are going to have.

Comr. McMANAMY. Do you know whether or not the Northern Pacific line still uses that division from Cheney in to Spokane?

A. No; I am not familiar with that territory at all.

Q. (By Mr. ELLIS.) I believe you stated that the distance between Crane and Crescent would be too great to operate as one division, on account of the local service between. Would not that depend upon the amount of local service and the amount of local traffic that you would have to pick up and deliver along the line?

A. Well, no; not to any great extent; and this is the reason for it: The Oregon Short Line, and especially the Idaho division, speaking of that, because that comes under my jurisdiction—I have the largest division—we have no main line districts or branch lines that are anywhere near that length. That is a long way, 190 miles. Now another thing enters into it that makes it another very important question. On these runs the pay of the men is based on eight hours, time and a half after eight hours. If it begins to run into many hours, it is cheaper to put on two, split it up, than it is to pay a heavy penalty overtime, or time and a half.

Comr. McMANAMY. Mr. Manson, isn't the pay of the men

1817 based on 8 hours or less, or 100 miles or less?

A. That is true, yes.

Comr. McMANAMY. Regardless of distance? does the overtime begin after 8 hours?

A. Yes, sir. (3304.)

Comr. McMANAMY. Regardless of distance?

A. You see, on mixed and local runs, that is a little different than the main line.

Redirect examination:

Q. (By Mr. SPENCER.) Mr. Manson, the examiner asked you whether this traffic discussion amounted to anything more than whether you would put on the service if the traffic was presented, as you do on the main line of the Oregon Short Line, and you answered if the traffic was offered you would furnish service for the cross-State line just as you do for the main line. Now, have you had any instance in the forty years of your experience where any line, main or branch, starts out with its full tonnage capacity in the first year, or the second year, or in the fifth year? Is it a gradual growth, or is it an immediate presentation of tonnage?

A. There is a gradual growth.

Q. Now, if there is traffic on a main line, does that involve more extensive equipment and present greater possibility of service than on a line where traffic does not exist?

A. On the main line, of course, that would be true.

Q. And do you know whether the shipper has a tendency to abandon such service where there is traffic and experiment on a new line? Or have you had any opportunity to make any such comparison? (3305.)

A. Well, my judgment is that they would not.

Exam. ROGERS. Don't misunderstand my questions, Mr. Spencer. I said nothing about what the traffic was going to be.

1818 Mr. SPENCER. No; I understand. That was just the point. We don't any of us know what the traffic is going to be. But I am asking. I am asking in the light of experience, whether there is any occasion, or any time in this man's operations, which have been very extensive, over a great many years, whether there is the anticipated conditions here of bringing in a great big slab of traffic and putting it over a railroad, has ever happened in your experience or operation?

A. No, sir; it never has. We start in low and build up as——

Exam. ROGERS. Well, Mr. Spencer, I won't ask Mr. Manson that, but do you know of any case where we have had a like proposal as we have here?

Mr. SPENCER. Well, I think this probably does stand in a class by itself. I don't remember any occasion of that kind—that is true.

Now, balancing traffic that is as near equal in both directions as you can get, is a very great advantage in railroad operation, both from efficiency and economy. (3306.)

Now, for a full ballast section, we use about 3,000 cubic yards for a mile, as a rule. And we have 190 miles in round mileage to ballast. And a full ballast section on my basis would require 570,000 yards.

We use at the present time on our main line 100-pound rail, but the new standard adopted recently is 110 pounds to the yard for straight-

way and 130 pounds for heavy curvature, like the second district. (3307.) On the main line of the Oregon Short Line, we have 100-pound rail from Huntington to Pocatello. We have the same weight on the curves, as we have no curves that would require 130-pound rails.

Q. Now, of the lines you operate, the branch lines, have you any branch line with as thin traffic and as discouraging
1819 results in operation as the line that serves the Harney Valley from Burns to Ontario?

A. About the only one we have that compares with it in leanness is the Homestead branch.

Q. That is owned by the O.-W. R. & N., too.

Comr. McMANAMY. How about the Rogerson-Wells?

A. Well, the Rogerson-Wells does get some business, you know, Mr. Commissioner, between Twin Falls and Rogerson, and we call that, as a whole, you know, in operating it, see, Twin Falls to Wells.

Q. (By Mr. SPENCER.) Have you had any calls to ship out special trainloads off the line from Rogerson to Wells?

A. Trainloads?

Q. Any special service in there to take out tonnage or to bring it in? (3308.)

A. Yes; we have had one or two trains of stock since the line was opened. For instance, I think it was last week, we had a train of lambs; and by train, I mean 13 cars, that moved from San Jacinto, the Utah Construction Company's large ranch, to Rogerson and to Twin Falls, and east.

Q. Those are special services you are talking about?

A. Yes; but very seldom. And in addition, we have our regular operation three times a week.

Comr. McMANAMY. Mr. Manson, how does it happen, if the service on the Rogerson-Wells is heavier than on the Burns branch, that the one gets a mixed train each way daily and the other gets train service tri-weekly, or three times a week?

A. The Twin Falls-Wells line is very thin on traffic. There is not very much, except, as I say, between Twin Falls and Rog-
1820 erson. It is another very thin line, but it is not as thin as the Homestead.

Comr. McMANAMY. But one gets daily service and the other gets service three times a week.

A. Well, we have the same thing over part of the Homestead branch daily, or except—it is three times a week, you (3309) know, on the Homestead branch. There is more business on the Twin Falls-Wells line than on the Huntington-Homestead.

Exam. ROGERS. Is there more business on the Burns branch than there is on the Rogerson cut-off?

A. Well, I would say it was pretty close to the same. The Oregon Eastern may be a little heavier, just speaking offhand from memory.

Exam. ROGERS. Where, on the Burns branch?

A. Yes; on the Burns branch.

Exam. ROGERS. Is there any State regulation in this State such as there is in some cases about daily train service?

A. No, sir; there is none in Idaho, and there is none in Oregon that I know of.

We have mixed train service into Burns. We carry passengers. There is nothing of that kind required at Wells to go up into southern Idaho like there is into Burns. The passenger traffic is very thin on the Twin Falls to Wells line. I have the July statement and, as I recall it, we handled 58 passengers in one direction and about 60 or 62 from Wells to Twin Falls. (3310.)

I know about applying to the Oregon commission to shorten up our service into Burns. That was tried a year or two ago and refused. The last we heard of it was this: The Burns people, when we made our last change in time in May of 1928—they have always wanted a connection with No. 26, which leaves Portland in the evening, due at Ontario the following morning. That makes
1821 them a very good train from Portland to Burns. And by leaving Ontario 15 minutes after the arrival of No. 26 we got into Burns a little late for the mail and papers to be distributed, and the people of Burns requested that we get the train in there at an earlier hour.

Recross-examination:

The traffic that moves over the Rogerson-Wells branch is, to a substantial extent, at the present time, bridge traffic. There is very little local traffic between Rogerson and Wells. We do get a little ore out of Contact occasionally, but it is nothing regular. And we do get some stock occasionally from the Utah Construction Company. (3311.)

J. C. M. DODDS was thereupon produced as a witness on behalf of defendants and, having been duly sworn, testified as follows:

Direct examination:

I am auditor of disbursements for the Oregon-Washington Railroad & Navigation Company. (3312.) I have been in the auditing department of the O.-W. R. & N. since September 4, 1907.
1822 I have a statement of the mileage and the cost of the so-called Oregon Eastern branch owned by the Oregon-Washington Railroad & Navigation Company extending from Ontario Junction to Burns. The cost of that was $7,033,112.98. The mileage is 155.31. I haven't the figures showing the cost of the extension, or the investment of the O.-W. R. & N. has made in it, from Crane to Burns. They are not shown on this statement. It is included in that 7 million. The Brogan branch is not included in that. That is a separate branch. (3313.)

I have a statement of the cost of the Des Chutes branch, the branch from Sherman Junction to Bend. Of that, 95.3 miles are owned by the Des Chutes Railroad Company. The cost of that was $6,477,129.70. The number of miles we use jointly, or are operated jointly

with the Oregon Trunk Railway is 53 miles. The investment cost in that mileage is $3,566,454.80. The total cost of the two, 148.3 miles, was $10,043,584.50.

I do not know over what period of years this operation is to extend on this 53 miles. It is a long-term contract; 999 years is my remembrance.

Q. Is this the date of the contract [exhibiting document to witness]? (3314.)

A. The contract is dated May 17, 1910, and it states it is for a period of 999 years.

Q. Now the question was asked whether that contract carries the right to operate an extension from Bend. Who is that contract between—what parties?

A. The Oregon Trunk Railway and the Des Chutes Railroad Company.

It is my understanding that the extension on beyond Bend is by the Great Northern Railway and not by the Oregon Trunk. I am not aware of any provision in that contract giving the right of extension——

1823 Mr. SPENCER. I don't want to put the contract in evidence, unless there is some question about it. It is the only copy I have. There is not any provision in there, and it is between different parties. You can look it over [passing document to Mr. Ellis].

Q. Now, what rental is the Des Chutes Railroad Company committed to pay for that 999 years?

A. 4½ per cent on the invested cost, which, in 1926, was $92,000.04.

Q. And, in addition, participating in taxes and interest?

A. Yes, sir; they participate in the taxes.

Q. And maintenance?

A. And maintenance, operating expenses, and the like.

The Oregon-Washington Railroad & Navigation Company is a party to that agreement and obligated under its terms.

I have a statement of the operating income, revenues and expenses by accounts assignable to the Des Chutes Railroad Company. This is the calendar year of 1926, for the entire operation. The result of the operation there is a deficit of $255,685.21.

(Said statement consisting of 6 sheets was thereupon received in evidence, marked "Defendants' Exhibit No. 83, Witness Dodds".)

I have a condensed statement of the analysis of the business on that branch, that is the revenue received on the branch and business forwarded from the branch. (3316.) And business local to the branch. I have an exhibit showing how that is divided. That is for the operation by the O.-W. R. & N. Co. for the year 1926.

(Said statement consisting of one sheet was thereupon received in evidence, marked "Defendants' Exhibit No. 84, Witness Dodds".)

1824 I have a statement showing for the year 1926, the cars and tons, by commodities, of freight traffic forwarded from,

received on, local to, and passing over this Des Chutes branch. It consists of 3 sheets. (3317.)

(Said statement consisting of 3 sheets was thereupon received in evidence, marked "Defendants' Exhibit No. 85, Witness Dodds".)

I have a statement showing the shipments of alfalfa hay and hay not specified, from all points on the O.-W. R. & N. destined to points in western Oregon, including Portland, for the years 1926 and 1927. It consists of 11 sheets.

(Said statement consisting of 11 sheets was thereupon received in evidence marked "Defendants' Exhibit No. 86, Witness Dodds".)

I have an income, profit and loss statement on the O.-W. R. & N. for the years 1921 to 1927, inclusive. It consists of one sheet. (3318.)

(Said statement consisting of one sheet was thereupon received in evidence, marked "Defendants' Exhibit No. 87, Witness Dodds".)

The hay exhibit includes destinations of the Southern Pacific Line, the Oregon Electric, the Spokane, Portland & Seattle—it is all points in western Oregon for which we had shipments, including the Union stockyards at north Portland.

I have the general balance sheet of the O.-W. R. & N. Co. reflecting its financial condition as of the close of business on December 31, 1927.

(Said statement consisting of one sheet was thereupon received in evidence, marked "Defendants' Exhibit No. 88, Witness Dodds".) (3319.)

1825 Q. (By Mr. SPENCER.) Now contention has been made, Mr. Dodds, but perhaps not in this case, that the poor showing of the Oregon-Washington Railroad & Navigation Company is because of inadequate divisions allowed to it by the other Union Pacific system lines. Have you information with respect to the divisions accorded to the Oregon-Washington Railroad & Navigation Company in operations where the Oregon Short Line and/or the Union Pacific Railroad Company are involved?

A. Yes, sir.

Q. And also the divisions on business interchanged with the Northern Pacific Railway Company, the Great Northern Railway Company, the Chicago, Milwaukee & St. Paul Railway Company?

A. Yes, sir.

Q. I will ask you just to explain now what divisions are accorded to the Oregon-Washington Railroad & Navigation Company on business originating on its lines moving through these various gateways to the East, and on business received by the Oregon-Washington Railroad & Navigation Company from off these other lines?

A. On business between Portland and Omaha they were receiving 35 per cent of the total revenue; from Portland to Salt Lake, 53 per cent.

Q. Well, how does the mileage divide? The mileage via Huntington on Omaha would be 22.5 per cent, while they are allowed 35 per cent of the revenue. And on the Salt Lake, the mileage (3320)

would be 44.1 per cent, while they are allowed 53 per cent of the revenue.

Q. And compare that with the allowances made to them through the other gateways, and give the gateways and the roads involved.

A. Allowances through Wallula gateway of the Northern Pacific, the Northern Pacific gives 18 per cent, the Northern Pacific
1826 retaining 82 per cent. Through the Spokane gateway——

Q. Did you give that gateway? That is the Wallula gateway?

A. Yes, sir. Through the Spokane gateway with the Great Northern, the O.-W. R. & N. Company receives 25 per cent and the Great Northern 75 per cent. The same with the Milwaukee.

Q. Where is the interchange with the Milwaukee?

A. Spokane.

Q. Well, it is near Spokane?

A. Near Spokane.

Q. Yes; Marengo—or what is the name?

A. Plummer.

I have prepared a chart illustrating the divisions as made—showing the mileage, percentages, as well as the revenue divides. (3321.)

(Said chart was thereupon received in evidence, marked "Defendants' Exhibit No. 89, Witness Dodds.")

Q. (By Mr. SPENCER.) Have you any data prepared showing the interchange between the Oregon-Washington Railroad & Navigation Company and the Oregon Short Line Railroad Company at Huntington?

A. I have nothing in statistical form, but I have available here the tonnage that we have received through Huntington for the years 1926 and 1927.

Exam. ROGERS. That would be westbound?

The WITNESS. Yes; from the Oregon Short Line and eastbound to the Oregon Short Line. The year 1926, the gross tons—the net tons received were 1,185,334. In 1927——

Q. (By Mr. SPENCER.) That is the net tons of commercial freight received by the O.-W. R. & N. Co. from the Oregon Short Line Railroad Company?

A. From the Oregon Short Line, yes; during the year 1926, at the Huntington interchange. And in 1927, 1,288,755. (3322.)
1827 The eastbound delivered by the Oregon-Washington Railroad & Navigation Company to the Oregon Short Line Railroad Company in 1926, was 1,654,797; and in 1927, 1,495,446.

The gross tons in 1926, westbound, including the empties, were 3,025,753; eastbound, 3,456,290. In 1927, westbound, 2,990,195; eastbound, 3,196,967.

Q. Have you taken the traffic estimate of Mr. Lounsbury and the expense items estimated for the operation of the cross-State line and prepared from them a study reflecting the result of the operation of the cross-State line?

A. Yes, sir; from Crane to Crescent Lake.

Q. You might explain how you arrive at this.

A. I used the revenue as indicated by our traffic department, that would be secured for this line if constructed; and for the expenses I used the average of the last three years' operation on the Crane line, considering that this would be a continuation of that line; the maintenance of way and structures being on a relative road mileage and the other expenses (3323) on a train mileage. I have also used the cost of constructing and equipping this line as given by engineers and computed the amount of return which is contemplated under the transportation act and have shown the result.

Q. Did you get an estimate for the taxes and for the passenger and mail and express business there?

A. I have freight revenue, passenger revenue, mail, express and baggage revenue; and also I have the taxes included, in addition to operating expenses.

The taxes were computed on the same basis we are now paying in the State of Oregon for branch lines, on an average rate of tax per mile of road, branch line, the State of Oregon. And this study that I now submit to you is the result of my analysis and application of the current rates and expense items.

1828 (Said statement, consisting of four sheets, was thereupon received in evidence, marked "Defendants' Exhibit No. 90, Witness Dodds.") (3324.)

Q. (By Mr. SPENCER.) Is this the first year of operation?

A. It is supposed to be an average year, because you notice the revenues are based on the revenues of the last five years' estimate by our traffic department; also by using the operating expense average for the last three years of the Ogden Eastern, it gives you an average operating expense after the line has been under operation.

Q. Your net operating income would be in red figures, or reflect a deficit of $281,519 in a year?

A. Yes, sir; the net railway operating income; that is, deducting operating expenses and taxes from revenues would result in red $281,519.

Exam. ROGERS. Can you tell me, Mr. Dodds, without too much trouble, how many times the traffic on which this estimate was based would have to be increased in order that the line might earn what you deem a fair return?

A. Well, that involves the increased expense which may result as a result of the increased traffic. It all depends on what they will say in regard to maintenance, after listening to Mr. Manson here, and as to the condition of his line from a maintenance standpoint, and having used the maintenance average of that line, you see, that is involved. Also you will have increased train costs naturally. (3325.)

Q. (By Mr. SPENCER.) Well, increased facilities of all kinds, and increased fuel?

A. Yes, sir; and if your traffic increased possibly there will be an increase in——

Exam. ROGERS. Would there be any factor you could apply that would even approximate it?

1829 A. No, I could not, without some one outlining to me, that is from the operating department, as to what will be involved by them through this additional traffic. Basing it on our own operation, it would have to be increased a very large extent.

Cross-examination:

I could not tell you off hand the number of branch lines the O.-W. R. & N. Company has but there are quite a number; about half of our mileage is branch lines. (3326.) We have a few in Idaho and quite a mileage in Washington and Oregon as well.

The auditing department of the O.-W. R. & N. does not keep currently statements substantially in the form of Exhibit 83 for its various individual branch lines. This exhibit 83 was made up specially on this basis for use in this case. I may say, however, that for the Deschutes we have kept account of certain expenditures there currently on account of it being a separate corporate company. On Exhibit 83 the revenues and expenses were allocated to the Des Chutes Railroad Company on the following basis: The local traffic is on a mileage pro rate, allowing the Des Chutes line a constructive mileage of 1¼ mile for each mile of its service, a minimum of 25 per cent (3327) to the line performing the short haul and the local rates as the maximum for either line.

On all freight inter-lined, to and from stations on the Des Chutes line, it is allowed an arbitrary in excess of the rate to Sherman, subject to minimum proportions, as stated, of five cents to

1830 points west of the Nebraska-Wyoming line per hundredweight, and stations south of Maupin and Nebraska-Wyoming line ten cents; that is for 1918. For later years we have used from Freebridge to Maupin and points west of Nebraska-Wyoming line 6.9 cents, and for south of Maupin and points west of Nebraska-Wyoming line 14.1. That is the allocation of freight revenue. I allocated operating expenses as follows:

Operating expenses are actual, as near as possible, with the exception that there are some expenses which it is necessary to pro rate. For instance, you have your road master, who has a joint territory; we divide it on road miles, and the other supervisory expenses on road mileage of the division. And general office expenses applicable to the line are assignable on the basis of the road mile that this branch bore to the total road mile of the entire line, under maintenance of way. Under maintenance of equipment we use the different rates according to the expenditure. For instance, freight (3328) train car repairs we allocate on the basis of the relative freight car miles, revenue freight car miles, and the same principle for locomotive repairs and passenger.

Now on the lumber business from Bend, take a car of lumber from Bend moving via the Des Chutes Railroad to Sherman and thence

east over the Union Pacific system to Omaha, the terminal expense at Bend involved in the origination of that traffic would be covered in transportation expenses—rail line on sheets 5 and 6 of this exhibit. That entire terminal expense is charged as an operating expense against the Des Chutes Railroad Company. That entire terminal expense would not include the cost of bringing an empty car west to be loaded with pine lumber. It would only include such train expense as would be incurred in the case of the train coming down to Sherman on the branch. Sherman is the junction point on the main line.

1831 Q. So, as I understand you, any part of the cost of moving an empty from the East to Bend would be that part of the cost of moving the empty from Sherman down to Bend? (3329.)

A. Yes, sir; in the train.

Q. But the entire terminal expense involved in the origination of such car of lumber, apart from the empty car haul, as you described it, would be chargeable to the Des Chutes Railroad Company?

A. Yes, sir. But on a car coming in there would be no terminal expense at the other end assessed against the Des Chutes. To explain my meaning, if your car originates on some part of the O.-W. R. & N. or one of the system lines, coming to a point on the Des Chutes, their terminal expense would not be assessed against the Des Chutes. There is nothing included here for that. But whatever terminal expense was involved in the handling of that car after it got to Bend would be charged against the Des Chutes Railroad. (3330.)

Referring to Exhibit 90, I did not make any calculations for results of operation of the proposed cross-State line after the first year; this was an average year as I explained it awhile ago. This isn't the first year; it is the revenue of the fifth year with the average expenses based on the last three years of the Oregon Eastern. It isn't for the first year or for the tenth year. It is a year's operation after the line has been in operation using the fifth year revenues as given by our traffic department. So that the combined estimates of our traffic and auditing departments would show this result for the operation of the line after it had been constructed and in operation for a period of five years.

I said the units of operating expenses used in Exhibit 90 were the average of those of the Oregon Eastern branch from Burns to Ontario; an average for the three years. (3331.)

1832 For the purpose of Exhibit 90 I took the total as estimated by the traffic department.

Q. Well, then, what basis of allocating operating expenses did you use for Exhibit 90?

A. For maintenance of way and structures I used relative road mileage. For the other expenditures I used train miles, using the theoretical train operation as described by Mr. Manson, and with one exception, and that was in regard to train dispatching; instead of taking the average I used the train dispatching costs which he said would be caused on account of re-arrangement of dispatchers. With

that exception, all of the accounts are based on those averages and bases.

Exam ROGERS. Well, did that re-arrangement result in placing against this line two additional dispatchers?

A. Instead of giving them the average which amounted, roughly (3332) speaking, I think, to around $2,500.00, it raised it to about six thousand two hundred—I think that is the figure for train dispatching—$6,240.00. That $6,240.00 is for the number of additional dispatchers which he stated would be necessary on account of this operation. I allocated all of that to the new line because it was an additional expense which was not incurred or acquired under the present operation.

Q. Referring to Exhibit 83, I note on the first sheet for this year, 1926, a net railway operating income deficit, $255,685.00. If you were to make up a similar statement following the same method with all of the branch lines of the Oregon-Washington Railroad & Navigation Company, in your judgment would—that is, for the same year—would any of the others have shown a net railway operating income in the red?

A. I couldn't say. I have never even considered it.

Q. Have you ever made up similar statements to this for any of the other branch lines of the Oregon-Washington Railroad
1833 & Navigation Company?

A. No, sir. (3333.)

I couldn't say whether it is within the realm of reasonable probability that if such statements were made up for some of the other branch lines that deficits would be discovered if the same method were used. I wouldn't like to answer without looking at the traffic and considering the conditions.

Referring again to the dispatching expense of $6,240 that is the average expense per year. (3334.)

On Exhibit 85 in the column headed "Total" and the sub-title headed "Cars" the figures are the sum of the four columns following to the right under the heading "Cars." The column headed "Forwarded from" would include (3335) traffic originated at a point north of Bend and moving to Sherman and then beyond Sherman. And "Received on" would be traffic moving on to the line but finding destination at some point north of Bend. "Local to" would be movement between Bend and Sherman to points intermediate. "Passing over" would be traffic moving from a point beyond Sherman clear to Bend or from Bend through Sherman to a point beyond Sherman or it could be where you turn it over to the Prineville Railway. None of those four columns duplicate each other at all.

Q. (By Mr. ELLIS.) On Exhibit 90 you have included and used as (3336) your investment figure the cost of constructing and equipping a main line railroad such as Witness Buck set out in his exhibit, have you not?

A. I don't know as to whether he set it out as a main-line railroad. This is the figure that he used in his estimate of construction of this line.

Q. Then the result that you get is one where you have applied revenues from purely local traffic to a main line railroad?

A. The revenues that were used were those that were given to this line as they were anticipated by our traffic department.

1834 Q. The interest and investment is the major item in the account, is it not?

A. It is the largest single item.

Q. Is it not true that if the line should cost no more than nine million dollars to construct, as Mr. Newell has estimated, the difference in investment would practically wipe out the deficit that you show here?

A. Oh, no; I have a deficit without including any interest. You see, there is a deficit here from your operation of $281,519.00.

Q. Well, it will practically wipe out that investment, not considering your interest on investment?

A. No; because your interest is additional, no matter on what basis you figure on, whether it is nine million or twelve million.

Exam. ROGERS. If there would be no interest at all you would (3337) have still two hundred eighty-one thousand in the red?

A. Yes, sir; if the road cost you nothing it would still cost you that.

Mr. SPENCER. You pretty near have it now—you are pretty low, aren't you?

A. Yes, sir.

Mr. ELLIS. Exhibit 86, showing hay tonnage, doesn't purport to show all of the hay traffic into western Oregon, does it?

A. No, sir; this is just what originated on the lines of our company.

1835 F. N. FINCH was thereupon called as a witness on behalf of defendants, and having been duly sworn, testified as follows: (3338.)

Direct examination:

I am general superintendent of the Union Pacific system, O.-W. R. & N. unit, Portland, Oreg. I have been operating the Oregon-Washington Railroad & Navigation Company lines since August, 1921, as general superintendent, and in October, 1918, as assistant general manager and assistant general superintendent. I operate approximately 2,051 miles; about 2,200 including my joint operation. That includes the joint operation north, Mr. Spencer. I have got about 2,200 miles.

The standard of my railroad, the main line between Portland and Huntington, is maintained to Union Pacific standard for main-line construction and maintenance. As to what is the capacity of the Oregon-Washington Railroad & Navigation Company main line, whether it is operated now to its capacity, or whether it isn't: I

wish it were, but it most certainly is not. That question of whether an ultimate main line to handle the system traffic of the O.-W. R. & N. I think can best be illustrated by the fact that (3339) the traffic density of an operating division is not determined by the gross ton miles or car miles, but upon the train units moved over such section of track. The line between La Grande and Huntington is the most easterly operating district over which traffic to and from the East moves on the O.-W. R. & N. In October, 1926, the heaviest month of that unusually heavy year, we moved an average of 4.7 freight trains in each direction per day between La Grande and Huntington. In the first 14 days of January, 1923, we moved an average of 7.8 freight trains in each direction per day in this same territory,
1836 and this same movement in 1923 required considerable more train and helper locomotive miles, because of lighter power, than we now use. This traffic, however, was moved without difficulty, and had power been available and the necessity existed we could have without great trouble moved more than double the number of trains actually handled, therefore, the train movement now being made on our system main line between Huntington and La Grande is at least less than one-fourth of the train capacity of the railroad, and the question of double-tracking or of alternate main line is one far in the future.

In connection with this, in the first 14 days of January, 1923, we averaged 2.991 locomotive miles in that 100-mile district, and in October, 1926, we averaged 1,546.5 locomotive miles per day. (3340.)

Now, that wasn't done with a lesser amount of traffic moved per day. For the first 14 days of January, 1923, our average gross ton-miles per day on that hundred miles distance was 2,370,754, and per day for the month of October, 1926, 2,411,880, or a slightly greater gross ton mileage with practically half the locomotive mileage.

I selected that period of the first 14 days of January, 1923, for the reason that that was the period in which the O.-W. R. & N. had made its greatest train movement, and thought that that would make the best comparison of handling approximately the same amount of traffic, to show what the railroad will stand in the way of additional traffic before it will be necessary to consider double-tracking for alternate main lines.

Q. What is the capacity of the railroad now as compared with that period, 14-day period, in 1923—I mean as to its physical
1956 condition or as to its power to accommodate and handle traffic? I mean by that, length of its sidings, double-track, if any, the improvement in ballast or rail—anything that will facilitate the handling of the tonnage? Can you comment on that in a general way for a moment?

A. Well, all of the passing tracks have been lengthened in that territory, the line has been completely reballasted, laid with 100-pound rail, bridges strengthened, and, of course, engines of greater

capacity added to our equipment list. You (3341) might say, relatively, that based on our old operation we could handle double what we did then, that is, just roughly, and based on our present improved operation we can handle four times what we handled in those 14 days, or what we handled in the heavy period of October——

Q. 1926.

A. And that is without going to double-tracking or building any alternate lines.

Q. The suggestion of the cross-State line in this case contemplates the proposal on the part of the petitioners to take a substantial part of the tonnage, of the westbound tonnage, produced by the 10 southwestern Idaho counties and divert it to this proposed cross-State line. What effect would that have on your operation through the Huntington gateway in connection with the Oregon Short Line, the westbound tonnage diverted to this line?

A. You say that—let me get that straight—that it is proposed that tonnage from southern Idaho which now moves to Portland is to be diverted over this circuitous route through Eugene to Portland?

Q. Yes.

Mr. ELLIS. No; that wasn't the proposal at all, Mr.

1838 Spencer.

Mr. SPENCER. Well, it is across the route toward Eugene there, to Crescent Lake, the terminus, so it can go to either California or Portland, and I am asking you the effect it (3342) would have on your interchange there at Huntington.

A. Well, of course, any loss of westbound traffic is a very serious thing to the Oregon-Washington Railroad & Navigation Company. We have losses enough as it is, and more than enough, as a result of the Panama Canal, and any additional westbound traffic that is taken away from us is just merely—well, to put it gently—robbing us of traffic that we should have towards reaching an equilization in our traffic movement, our eastbound business preponderating, and, therefore, any loss of westbound traffic, which is already light, would mean an extremely serious thing to the railroad.

Q. Would that cross-State line so we could form an alternative route to the O.-W. R. & N. to go to Portland or—of course, it doesn't get into or connect with your rails at Bend or elsewhere—but the suggestion is made that it might be an alternate route for you. What do you think about that?

A. I can't conceive of anyone routing traffic around that way, an additional distance, and involving connections with a foreign company. If you refer to livestock that Mr. Manson testified about, why, of course, if the traffic moved in sufficient volume in both directions that should be done, but after a great many years we have built up a service on livestock to the north Portland market that shippers, commission men, and packers all unite in saying is first-class service, and

we have done that by doing as Mr. Manson says, taking the (3343) stock which originates on the Oregon Short line and arrives
1839 Huntington within 12 hours and loading it and running that straight through to Portland without stopping for feeding enroute, the other stock leaving Saturday morning and after feeding at Hungtington coming through.

There is also some advantage to the stock business in that route, in that coming west over our line our freight line diverges at Troutdale and comes down through Peninsula Junction, or Kenton, which is only 1.2 miles from the north Portland yard. Now, if they ran that stock via Eugene with the idea of diverting, it seems to me that they would run against the possibility that in shipment either the shipments left to move to Portland or to move to California would be inadequate to justify special service. In addition to that, after the stock arrived at Brooklyn, the Southern Pacific yards, you would have a switch movement of approximately 4½ miles to reach our Albina yard, and then 4 miles from Albina yard switch movement out to Peninsula Junction, on top of the 1.2 miles switch movement to the yards, and it doesn't seem to me that the stock would move via that route and make it through to the yards within the 36 hours which we now give it, and that consequently would have to stop and feed enroute.

Q. As I understand you, your freight line business from the north—or to or from the north Portland stockyards doesn't go into your Albina terminal at all? (3344.)

A. Not with stock. The switch engine meets the train at Peninsula Junction, the road engine cuts off and the switch engine couples onto it and goes up that mile and two-tenths and shoves that stock into the chute, and there is practically no terminal delay on the stock at all.

Q. And is that true as to all livestock that goes into those yards——

1840 A. Yes, sir.

Q. That goes north into Seattle?

A. Well, the Seattle stock, Mr. Spencer, very little of it feeds at North Portland. Most of the stock moving west from the Idaho territory comes over the—for Carstens and Frye unloads at The Dalles, because for some reason they don't like to patronize the North Portland yards, and we move that stock in here and make an immediate connection to the north.

I do not know to what extent the yards are patronized by Puget Sound buyers in the purchase of stock. Of course, I know that they patronize it a good deal, but on certain of the stock these people want to unload it at The Dalles—I imagine in connection with feeding the animals and then getting a through run—rather than bringing them into Portland then feeding them.

Q. It has been suggested here, or perhaps positively testified—I don't know how Mr. Wiggins intended it—the contention (3345)

was made that this operation through Crescent Lake might be economical and advantageous because of the expense and delay in putting traffic through your terminals at Portland, and because of the congestion that obtains at your terminals at Portland. Is there any congestion in your terminals? How extensive are your terminals, and what areas have you got here to permit of expansion, if you have any?

A. Well, I will say first that we have almost unlimited expansion in our Albina district. We haven't tracks on half the land that we have there. The Albina yard district has a capacity of 2,000 freight cars, and the Portland terminal, in which the Oregon-Washington Railroad & Navigation Company is a joint user, has a car track capacity of 1,020 cars. Then out of terminal No. 4, the mu-
1841 nicipally owned port, is a track capacity of 250 cars. As to whether I operate that, it is operated by us for the joint account of the S. P. & S. and its parent companies and the O.-W. R. & N. The matter of congestion, Mr. Spencer, isn't a matter of yard tracks. That is a matter of power and crews to move the through business. I don't believe that for years there has been any delay in the movement of through traffic on the O.-W. R. & N., and that is due to the fact that we have adequate power and crews at all times to move the business, and as fast as a trainload accumulates it is run. (3346.)

Now, so far as our Albina terminal is concerned, of course, it is necessary to have set aside at all times a certain number of live or train yard tracks upon which your outgoing and incoming trains are broken up and made up. Unfortunately for the O.-W. R. & N., its volume of business is not sufficient to keep the live tracks and train yard tracks fully occupied, and we could handle a very considerably increased traffic through the Albina terminal in the way of through business without having to add a foot of trackage or without causing any delay whatsoever. (3347.)

Cross-examination:

Q. (By Mr. ELLIS.) Mr. Finch, the testimony you have given with reference to livestock traffic relates solely to the movement of livestock traffic to Portland, does it not, and you didn't have in mind the movement of livestock from southwestern Idaho to San Francisco?

A. No; as I understood the question, Mr. Ellis, it was a question of whether this stock that now moves to Portland from Idaho might be diverted to route over this assumed cross-State line and throw that traffic which now moves to Portland—a part of it be diverted to go to California and part of it moved here. I didn't understand that it referred to any increased business.

1842 Q. You are not questioning in your testimony any advantage that might accrue on livestock moving to San Francisco over (3348) a shorter route than the present route through Ogden or through Portland?

A. Well, I don't know anything about the distances from that territory to San Francisco. I am just discussing the inadvisability of routing stock shipments that way that would ordinarily go to Portland. In other words, the service on the stock which ultimately came to Portland through that gateway would not be as good as the present service to Portland.

Q. You will recognize, however, that there would be some compensating advantages in having two markets available until the shipment reached Crescent Lake, would you?

A. Well, I don't know that I would admit it; no. As to whether it would be largely a matter for the shipper who is selling the livestock to determine whether the disadvantages that I say would exist might be outweighed by other advantages in the way of markets made available, why, they might figure that way, Mr. Ellis, at first; but I don't believe from my experience in handling the stock and meeting the shippers that that arrangement would continue very long. In other words, I don't believe that they would be satisfied to route that way on the bare chance that they might transfer to the Frisco market. In these days of quick advice as to market conditions it seem to me that the man who (3349) wanted to ship to Frisco would have his mind pretty well made up before he started to ship.

Q. Have you ever had any experience in marketing livestock?

A. Well, not for a great many years, but I did as a young man.

1843 Q. Would you concede, Mr. Finch, that the per car cost of handling traffic through a terminal the size of Portland would be any different from that through a terminal the size of Eugene?

A. Not at all as to the through traffic. As to whether there would be some difference as to local traffic, there would be as to traffic which had a destination at that terminal, but not as to traffic moving through the terminal. For example, you understand, Mr. Ellis, at a point like Eugene the movement to reach every industry is only a very short distance, whereas at a point like Portland your freight which arrives to be delivered to a consignee is apt to move from six to eight or nine miles in going from the break-up yard to the destination, but so far as a car coming into Portland in a train and going out from Portland in a train, the cost, if anything, would be less in a large, well-organized terminal, where you have no dead time of your switch engine and crew.

Q. Well, would you say that the handling of those local cars which you say must be switched great distances would in no way affect the through traffic moving through the terminal? (3350.)

A. Not at all. Not at all.

We don't have a hump in the Portland yards. We don't have sufficient business to justify one.

I think I was with the Northern Pacific at the time the cross-State line was first projected.

As to how much additional traffic might be economically handled over the existing single track of the Oregon-Washington Railroad & Navigation Company, from the standpoint of practical opera-
1844 tion, I think we could very easily handle four times what we are handling, and, of course, the greater the volume of traffic up to a given point the cheaper becomes your operation. I am not going to say at what point I would reach the maximum of economy, because I haven't yet found the man who could tell you that, and I certainly can't do it. You know it when it occurs.

Q. Would a second main line located through central Oregon along the route of the cross-State line be of any value as an auxiliary line in the event of no conditions or other emergencies along the present route?

A. Why, I don't know enough about that territory, but the snow (3351) trouble on the Oregon-Washington Railroad & Navigation Company is really rather infrequent. Only twice in the ten years that I have been there have we had any snow trouble that interferred to the slightest extent with the movement of traffic, and in connection with your question about alternate main line I would like to point out to you, Mr. Ellis, that it is a great deal cheaper to maintain a second main line or double-track than it is to maintain an alternate main line to move the same traffic.

Q. But would it be as useful in the event of snow difficulties or other emergencies which block your main artery, such as might exist, or such as existed along the Columbia River?

A. No; that is getting so far into the fancied possibility of trouble, and I know nothing about the territory—I don't know, you see, but what they may have more snow down there going across from Eugene over to Crescent than we have on our main line, so I am really not qualified to testify.

Q. Whenever your main line is blocked by snow or other emergency conditions in the Blue Mountains, what other routes of traffic have you to handle your trains into Portland?

1845 A. In the ten years that I have been with the Oregon-Washington Railroad & Navigation Company we have never been delayed to exceed ten minutes on any train on account of snow in the Blue Mountains. (3352.) As to other points on our main line, we have down here in the Columbia River Gorge twice, and in that case the Spokane, Portland & Seattle one of the years was immediately available to us as an alternate route; the other year they also had some similar trouble.

The question of snow removal is an important one in the operation of the Oregon-Washington Railroad & Navigation Company lines at the present time; it is an item of expense. And if snow conditions are less severe on the proposed cross-State line than on our existing route, that is not a factor worthy of some consideration in an expression of this kind, when you are considering the question of additional expenditure of money. It wouldn't represent a drop in the bucket. I mean that in connection with our expenditures in main-

taining a line of railroad through the State of Oregon, our snow conditions, cost of snow fences, cost of snow removal, are insignificant in comparison with the cost of maintaining an alternate main line, in comparison with the cost of maintaining an adjoining double track. In other words, they figure that it costs about 60 per cent to maintain that double main track of what it costs to maintain a single main line in equal condition. With an (3353) average cost per main line mile for maintenance in a year of about $3,600, the difference in that of a few miles of railroad would make your cost of removing snow practically insignificant.

The Oregon-Washington Railroad & Navigation Company has not constructed any double-track between Huntington and Portland since I have been with the railroad. They have double-tracks
1846 from Crates to Biggs, of about 21 miles, which goes through The Dalles; and then there is about six miles on top of Kamela Hill.

Q. Well, can you explain why it was necessary to double-track those sections, if your present line isn't making anywhere near capacity?

A. Well, I dislike to comment on that. It was absolutely, in my opinion, unnecessary.

Q. But the officers of your company spent many thousands of dollars in doing it.

A. Well, of course, mine is after-thought. On the basis of their operation as they then operated, with the class of power and other conditions, they may have figured without conceiving the development of the steam locomotive that that double-track was necessary. I wasn't here and don't know when the idea was conceived, but that may be the answer; but on the basis of our present operation the double track is not necessary. (3354.)

Q. Would your judgment be the same with reference to the double-trackage on the Oregon Short Line, concerning which Mr. Manson testified?

A. I have no knowledge whatever of the details of the Oregon Short Line operation. I don't know how the traffic compares between the Short Line and the Oregon-Washington Railroad & Navigation Company.

Q. (By Mr. McCulloch.) Mr. Finch, in addition to its existing traffic, in your judgment, could the O.-W. R. & N. handle efficiently all of the western Oregon traffic via Portland that now moves via Roseville?

A. I have no figures as to what that traffic amounts to, Mr. McCulloch.

Q. Do you know whether the Southern Pacific's line to
1847 Ogden from Roseville is operated more nearly to capacity than the Oregon-Washington Railroad & Navigation Company's line from Portland to Huntington?

A. You mean from Roseville east?

Q. Yes.

A. Well, I don't know as to its capacity. I know that they handle a very much greater traffic east from Roseville than what we handle over the Oregon-Washington Railroad & Navigation Company. (3355.)

I don't know whether it is a larger per cent of its capacity than our traffic constitutes of our line's capacity. That would require a study, and I presume they can give you witnesses that can tell you what their capacity is.

Exam. ROGERS. Mr. Finch, as I understood, they figure that the traffic wouldn't amount to more than five or six trains a day.

A. Yes, sir; if that is all, we could handle five or six more trains a day on our railroad without any trouble whatsoever, in each direction, freight trains.

Exam. ROGERS. That is the question Mr. McCulloch asked you about the Roseville traffic—if it didn't amount to more than five or six trains a day you could handle it through Portland without any trouble?

A. Yes, sir.

Q. (By Mr. MCCULLOCH.) I was going to ask you what differentiated the situation as far as having the additional route across the State by the construction of this proposed cross-State line in Oregon—assuming that the Union Pacific system built that line
1848 and had that additional route across the State—from the situation in California, where across the State from east to west the Southern Pacific has two routes, the Roseville route from Roseville to Ogden, and the Sunset route in (3356) the southern part of the State.

A. I have been so busy trying to run my own railroad that I know nothing about the Southern Pacific, Mr. McCulloch.

I selected the division between La Grande and Huntington to figure the capacity because that is the last district east to Huntington over which our eastern business moves. Our particular road ends at Huntington, and everything running to the east, no matter where it originates, does move over that district, whereas if you took the district on this side, the La Grande district, and the Joseph branch district, and the Baker district wouldn't have moved over that district to and from the east.

The division across the Blue Mountains is not the most difficult operating division and the capacity is not less there than on the La Grande division. Our trains have the same rating from Rieth to La Grande and La Grande to Rieth that they have from La Grande to Huntington.

We use helpers in both territories. There are two helper districts in the territory between La Grande and Huntington, and one helper district between La Grande and Rieth. In other words, we have two hills between La Grande (3357) and Rieth, the first one being 1½ per cent adverse eastbound, 1 per cent adverse westbound, and a second hill out of Baker 1½ per cent adverse eastbound and 2.2

adverse westbound, whereas in the Blue Mountains, so-called—these are all spurs of the Blue Mountains that we cross over there, but the main ridge of the Blue Mountains we have one helper district 2.2 in each direction. That is just west of La Grande. The
1849 length of the hill from Baker up to Encina is about 11 miles.

I have never been to Crescent Lake. I might state it is very seldom I get off of my own right-of-way. Assuming that the snow there reaches a depth of ten feet for a considerable period in the winter, and that the temperature is down to zero and below and an altitude of about 4,500 feet (3358), I most certainly would not consider that a very favorable situation for interchange, and if they have such snow as that they have much worse conditions than we have on the O.-W. R. & N.

(Witness excused.)

Mr. SPENCER. I have some questionnaires and answers propounded to Mr. W. B. GREELEY, U. S. forester formerly, and now manager of the West Coast Lumbermen's Association. Mr. Greeley was subpœned to come, the subpœna having been issued by Commissioner Meyer at our request when the case was first set, but his calls were such that the counsel for the petitioners agreed that we could read the questions and answers resulting from the correspondence I submitted to them into the record and introduce these exhibits as a deposition. (3359.) They are exhibits, most of them, that I wanted to introduce, but I think perhaps the questionnaire should be read here, and then I can introduce the exhibits with it.

Comr. MCMANAMY. That is agreeable to counsel? Proceed.

Mr. SPENCER. The following are the questions and answers submitted to Colonel W. B. Greeley and by agreement of counsel to be received as a deposition in this case:

"Question. Please state by years the amount of softwood lumber produced in Oregon, Washington, and Idaho respectively during the years 1923 to 1927, inclusive.

1850 "Answer. Tabulation attached, marked 'Q. 1 and 2' give the required information as to Oregon and Washington softwood (3360) production, no such detailed data being available in our files as to Idaho." I now present these questions one and two as an exhibit.

(Said paper was thereupon received in evidence, marked "Defendant's Exhibit No. 91.")

Mr. SPENCER. Question 2. "Please classify the foregoing as between fir, pine, and 'other species.'

"Answer. Tabulation attached, marked 'Q. 1 and 2' give the required information as to Oregon and Washington softwood production, no such detailed data being available in our files as to Idaho."

"Question 3. State approximately and by years the percentage of this production that has been transported by water and rail respectively.

"Answer. Tabulation attached, marked 'Q. 3,' answers this question." (3361.)

(Said tabulation was thereupon received in evidence, marked "Defendant's Exhibit No. 92.")

Mr. SPENCER. "Question 4. To what markets did it move?

"Answer. Tabulation attached, marked 'Q. 4,' answers this question." (3362.)

Q. 4 embraces graphic charts, lumber distribution from Oregon and Washington, and also the detail by the West Coast Lumbermen's Circular No. 4618 of April 23, 1928, consisting of some five pages.

Exam. ROGERS. What is the West Coast Lumbermen's Association, Mr. Spencer?

1851 Mr. SPENCER. The West Coast Lumbermen's Association is an association of all the mills west of the Cascade Mountains—not all of them, but largely comprising the mills, substantially all the mills, west of the Cascade Mountains, as I understand it. I think that—doesn't Mr. McCulloch appear for them in this case? You know that association better than I do.

Mr. MCCULLOCH. Yes; Mr. Spencer stated it correctly. They are the principal mills, and represent about 85 per cent of the fir lumber produced in Oregon and Washington.

Comr. MCMANAMY. Do they include the Willamette Valley Lumbermen's Association?

Mr. SPENCER. Quite a number of the members of the Willamette Valley Association are members, and have been for years, of the West Coast Lumbermen's Association.

Mr. LOUNSBURY. The larger mills.

Mr. MCCULLOCH. Yes. (3363.)

Mr. SPENCER. Chart of the United States, compiled by the West Coast Lumbermen's Association, Seattle, and chart of lumber distribution from Oregon and Washington, and tabulations by districts as compiled under Circular No. 2618, comprising five pages, introduced as one exhibit.

(Said papers were thereupon received in evidence, marked "Defendants' Exhibit No. 93.")

Mr. SPENCER. [Reading.] "Five. Q. Has there been any failure on the part of the railroads serving these three States to move the lumber in question tendered to them for shipment with reasonable dispatch during this period since 1922?

"A. No.

"6. Q. What lumber milling operations of importance have been established in these three States since 1922?

1852 "A. In Oregon and Washington: Large operations:

"Long-Bell Lumber Company, Longview, Washington; Oregon-American Lumber Company (Central Coal & Coke), Vernonia, Oregon.

"Medium operations, daily: Washington Lumber & Spar Company, 125,000 feet; Henry Mills & Timber Company, 80,000 feet;

The Reed Mill Company, 125,000 feet; Henry McCleary (3364) Timber Company, 225,000 feet; Weyerhaeuser Timber Company (Mill C), 150,000 feet; Columbia River Paper Company, 125,000 feet; Western Lumber Company, 100,000; total, 930,000 feet.

"In Idaho, Clearwater Timber Company, Lewiston, Idaho.

"7. Q. What is the daily or annual production capacity of each of said mills?

"A. Long-Bell Lumber Company, 1925, 235,000,000 feet board measure; 1926, 344,000,000 feet board measure; 1927, 420,000,000 feet board measure; daily capacity, 850,000 feet board measure.

"Oregon-American Lumber Company, 1925, 134,000,000 feet board measure; 1926, 153,500,000 feet board measure; 1927, 141,200,000 feet board measure; daily capacity, 300,000 feet board measure.

"Clearwater Timber Company not operating in 1927, daily capacity per 8-hour shift said to be 400,000 feet board measure. (Four L News, August, 1927.)

"Others—answered in question No. 6.

"8. Q. What lumber mills are now in process of construction in these States and what is the production capacity of each?

"A. Weyerhaeuser mill now under construction at Longview, Washington, with estimated daily capacity per 8-hour shift of 750,000 feet board measure. (3365.)

1853 "9. Q. Do you know of your personal knowledge or by public pronouncement of any lumber mill or mills of large producing capacity about to be constructed?

"A. Weyerhaeuser mill at Klamath Falls, Oregon, with estimated daily capacity of from 250,000 to 275,000 feet board measure. (West Coast Lumbermen, June 1st.)

"10. Q. What is the capacity production of same?

"A. Same as question No. 9.

"11. Q. To what percentage of capacity are the lumber mills in Oregon, Washington, and Idaho operating at the present time?

"A. Approximately 80 per cent—Authority, A. D. Davis Statistical Bureau.

"12. Q. How many of them have shut down or suspended operations?

"A. Since June 1st, 1924, 24 mills in western Oregon and Washington have suspended operation for various causes, such as fires, failures, depletion of timber, etc. These 24 operations had an approximate daily capacity of 3,295,000 feet.

"13. Q. Has the supply of softwood lumber in the United States during the past five or six years been in excess of the demand therefor?

"A. Yes; at least as to demand at prices sufficient to permit profitable manufacture. (3366.)

"14. Q. Has the lumber manufacturing business been in a depressed condition during recent years—and what is its present condition?

"A. Yes. Industry now depressed.

"15. Q. For several years last past has the lumber manufacturer in these three States been operating at a fair profit, and what is the fact in this regard at the present time?

1854 "A. Average lumber manufacturer in the Douglas fir region has been and is now operating without profit.

"16. Q. Is it not a fact that speaking generally for several years last past the timber in these States has been out, manufactured and marketed at no substantial profit to the manufacturer?

"A. Yes.

"17. Q. Do you consider that market conditions now obtaining or in prospect for the next few years warrant the construction of more lumber mills in the States of Oregon, Washington, or Idaho?

"A. No.

"18. Q. In your opinion will the interests of these States or of the United States or of individuals as owners of timberlands in these States be served to advantage by the construction in the near future of mills of substantial capacity for the manufacture of lumber? (3367.)

"A. Not under present market conditions, except as financial interests of individuals may require mill construction to liquidate timber investments.

"19. Q. Save and except for an occasional spur or branch line that may be or become necessary to build into the timber from some existing railroad for movement of logs, is there any necessity in your opinion for the construction of additional railroad or railroads in these States in order to transport with reasonable dispatch the lumber that will be tendered for shipment by rail during the next few years?

"A. Not from the standpoint of the present total volume. Additional facilities may be required to keep pace with the shifting location of lumber production.

1855 "20. Q. To what extent has the production of pine in the southern pine belt in the South Atlantic and Gulf regions decreased since January 1st, 1923?

"A. Annual production of yellow pine:

"1923, 12,948,687,000 feet; 1924, 12,486,590,000 feet; 1925, 13,235,936,000 feet; authority, Table 55, Statistical Bulletin No. 21, U. S. Department of Agriculture.

"1926, 13,000,000,000 feet; 1927, 12,000,000,000 feet; estimate made by the Southern Pine Association.

"21. Q. Has this decrease been as large as anticipated by you when your letter of December 4th, 1922, was written?

"A. No. (3368.)

"22. Q. What elements have entered into the business causing a larger continued production by the southern pine mills than you anticipated?

"A. Mainly, numerous small mill operations in second-growth yellow pine, farm wood lots, and small holdings of old-growth timber.

"23. Q. Would you venture an estimate now of the approximate date when the southern pine forests will be exhausted to an extent that will not permit the southern pine mills to export in substantial volume from the States in which they operate?

"A. No. The best estimates available indicate that the out of southern pine may decrease to about ten billion feet in 1928 and nine billion feet in 1929, and that it appears probable that the cut of southern pine will become relatively stable at about six or seven billion feet annually for some time to come.

"24. Q. Please name the States wherein the southern pine is manufactured in substantial volume.

1856 "A. In order of production importance; Mississippi, Louisiana, Alabama, Texas, Arkansas, Georgia, Florida.

"25. Q. Please state by years since 1922 the annual consumption of softwood lumber manufactured in the United States.

"A. This question is understood to refer to annual production since the following question (26) deals with consumption. (3369.) The following is therefore information on production:

"1922, 26,644,334,000 feet board measure; 1923, 30,903,981,000 feet board measure; 1924, 29,405,685,000 feet board measure; 1925, 31,710,478,000 feet board measure; source, Table 55, United States Department of Agriculture Bulletin No. 21.

"26. Q. How much of this has been consumed in the United States?

"A. 1922, 24,789,331,000 feet board measure; 1923, 28,259,334,000 feet board measure; 1924, 26,390,999,000 feet board measure; source, Table No. 67, United States Department of Agriculture Bulletin No. 21.

"1925, blank; 1926, 27,357,464,000 feet board measure; source, Bureau of Railway Economics Bulletin No. 30, June, 1928.

"27. Q. From what sources of manufacture has the export and domestic demand been met?

"A. Principally from the Pacific coast and southern pine groups."

Exam. ROGERS. Now, is this man giving figures based on Bureau of Railway Economics?

Mr. SPENCER. One item in 1926. The others are from the Department of Agriculture, and one figure was given taken from the Southern Pine Association.

"Q. To what extent have substitutes for lumber displaced its use since 1922? (3370.)

1857 "A. In connection with this question there is sent under separate cover a pamphlet entitled 'What's the Matter with the Lumber Industry.' Please be referred to chart on page 49 which is probably the most tangible answer to the question it is possible to formulate. While this chart indicates that the actual loss in lumber used in comparison with 1909 is approximately ten billion board feet, assuming that the use of lumber had remained stationery at the 1909 level, the probable loss of markets to lumber due to the use of other materials is undoubtedly greater than ten billion board feet." (3371.)

Mr. SPENCER. The last question was, "To what extent have substitutes for lumber displaced its use since 1922?" I think I completed the answer to that. I did.

The witness, or the pamphlet to which he refers, entitled "What's the Matter with the Lumber Industry," was received, two copies, or three copies, and I prepared from same the charts set forth in those pamphlets, commencing with page 22 and to page 63, and I think they are all in there. In any event, the copies that I desire to introduce from it are bound and now we present them as exhibits in connection with Colonel Greeley's testimony, photographed from the publication.

(Said book was thereupon received in evidence, marked "Defendants' Exhibit No. 94.")

Mr. SPENCER. The letter to which the interrogatories referred accompanies the correspondence submitted to counsel, and is, therefore, submitted to be read or incorporated in the record. It reads at some length, bears date December 4th, 1922, and is addressed to Mr. J. M. Devers, Assistant Attorney General of Oregon, to the Lafayette Hotel, Washington, D. C., under that date, signed W. D. Greeley, Forester U. S. Forestry Department. (3372.)

1858 (Thereupon said letter was read into the record as follows:)

[Copy]

December 4, 1922.

Mr. J. M. DEVERS,
Lafayette Hotel,
Washington, D. C.

DEAR MR. DEVERS: I am writing you to confirm our conversation on December 2nd, regarding the extension of transportation facilities in the State of Oregon. I am not qualified to form any judgment regarding the issues involved in the present hearings before the Interstate Commerce Commission. Without knowing how it may affect these specific issues or whose contentions it may support, I wish to say that the enlargement of the facilities for shipping Oregon timber, by rail or by water (3373), to the central and eastern lumber markets of the United States is a matter of very great necessity.

During the last 25 years, the main source of softwood lumber for general construction, house building, and industrial uses in the greater part of the Mississippi Valley and the States to the east of it has been the southern pine belt in the South Atlantic and Gulf regions. The production of lumber in these regions passed its peak about 1916 and is now gradually decreasing from exhaustion of standing timber. A survey made by the Forest Service in cooperation with lumber manufacturers in 1920, covering 5,400 sawmills in the southern pine region, showed that over 97 per cent of them will cut-out their timber by 1930, with a reduction in the output of this group of mills aggregating 78 per cent. Every year that now

1859 passes witnesses the dismantling of a considerable number of these mills; and much of the capital hitherto employed in

lumber manufacture in the south is now seeking new locations on the Pacific coast. An experienced lumber manufacturer of the south, after exhaustive study of the situation, made the estimate in 1920 that by 1930, if the consumption of lumber in the Eastern States does not materially decrease, it will be necessary to increase eastbound lumber shipments from the west coast to eastern markets to the extent of 11 billion board feet per year. This contemplates simply replacing the market requirements hitherto supplied from the pine forests of the (3374) South.

The only large supply of softwood timber now remaining in the United States is on the Pacific coast, including Alaska, and in the Columbia River Basin. The lumber manufacturing industry is now moving rapidly into this region, just as thirty years ago it moved from the region of the Great Lakes into the South. The demands for western lumber to supply eastern and central markets will, in my judgment, at least double within the next ten years. With the most rapid development of transportation facilities that can be expected, I anticipate that there will still be a serious congestion of eastbound lumber shipments from this region, more or less chronic, which will affect adversely the interests of the lumber consumers of all classes in the Eastern States. As a broad question of public policy, I believe very strongly that every reasonable effort should be exerted to increase transportation facilities from the principal timber regions of the West to eastern markets. This, of course, includes water transportation as well as rail transportation.

1860 The State of Oregon contains an estimated stand of 494 billion feet of timber, or over 20 per cent of all the timber in the United States. Oregon ranks first among all the States in timber resources. In from ten to fifteen years Oregon is bound to become the leading State of the Union in lumber production. Its present rail facilities are in my judgment (3375) wholly inadequate to the production of forest products which the resources of this State ought support. I regard it as particularly important to see the resources of Oregon for water shipments of lumber to the Atlantic Coast increase and also to see additional outlets provided to the Willamette Valley and the pine regions of central Oregon for eastbound lumber shipments. The national forests of Oregon contain about 131 billion feet of standing timber. Our present yearly cut from these Government properties is 137 million feet of timber. The yearly cut from the national forests of Oregon could properly be increased to ten or twelve times the present amount, while still insuring the unimpaired perpetuation of the resource and utilizing only its current annual growth. It would be desirable from every standpoint to bring the cut from these national forests up to that amount, to utilize old virgin timber that is now deteriorating from decay, to increase public revenue for the Nation and State, and to afford an additional supply of forest products for the markets of the country. The possibility of increasing the cut from the national forests depends to a considerable degree upon the enlargement of rail facili-

ties. To this extent, the Government has a direct interest in the matter. The predominant consideration, however, in my judgment, should be the fact that the dependence of the entire country for softwood timber is rapidly shifting to the west coast, and that its existing rail (3376) facilities are inadequate to meet this
1861 growing demand.

Very sincerely yours,

W. B. GREELEY,
Forester.

Mr. SPENCER. The last question propounded is in that original manuscript. I don't have it here. But I asked him if there was any other matter he desired to explain to please do so, and he refers to this letter, with this statement, headed "Statement by Colonel William B. Greeley," July 9, 1928, and I can introduce that the same way in the record, or read it, as it may be desired.

Comr. MCMANAMY. If there is no objection it may be copied in the record.

Mr. ELLIS. There is no objection.

Mr. SPENCER. All right.

(Said statement was thereupon set out in full as follows:)

"Statement by Colonel William B. Greeley, July 9, 1928

"I must admit that my own viewpoint regarding the problems which you present has changed somewhat since my letter of Dec. 4, 1922, was written; and this change occurred prior to my leaving the U. S. Forest Service on May 1st, 1928.

"The conditions governing the marketing and use of lumber have been greatly changed on account of the use of other (3377) materials to an increasing degree. This has been reflected in a substantial drop in the per capita consumption of lumber in the United States since about 1910.

"The lumber industry in the Pacific Northwest was devel-
1862 oped primarily in the belief that the normal consumption of lumber in the United States under former standards would continue, while the production of lumber from other softwood regions would decline, as has been proved in the past history of many of the older manufacturing sections. These results have not been fulfilled to the extent anticipated when the industry was in the course of development on the northern Pacific coast. The markets for lumber have not expanded to the degree contemplated, largely because of the use of other materials than wood. At the same time the production of southern pine has not decreased as rapidly as was anticipated owing principally to the amounts of second growth timber in the South and the operation of numerous small mills.

"Because of these factors the lumber industry of the Pacific Northwest has experienced frequent periods of overproduction in relation to the demand at prices sufficient to permit profitable manu-

facturing. Such a period has prevailed substantially since 1923. The most important development for the lumber industry on the northern Pacific coast, as I see it, is to restrict overproduction of lumber as far as possible, manufacturing its products in a more orderly and effective (3378) relationship to the markets actually available.

"With the foregoing conditions in mind, it would seem to me inadvisable to increase the operating capacity of Oregon and Washington sawmills until the present situation has changed sufficiently to provide an assured market at prices permitting profitable manufacture, for a larger output of lumber.

"It of course goes without saying that the lumber industry of this region is more dependent upon railroad service and freight rates than that of any other portion of the United States for
1863 the marketing of its products at satisfactory returns. Any development that would result in reduced freight rates to the principal interior and eastern markets would be of utmost benefit to the lumber industry in this region. Furthermore in the course of time, as lumber production shifts from Washington to Oregon additional railroad facilities may be required to market efficiently the product of the new regions of heavy production."

Mr. SPENCER. That concludes Mr. Greeley's testimony.

Mr. DEY. I would like to ask the witness one question: What official position has Colonel W. B. Greeley held in the United States in the last several years?

Mr. SPENCER. Well, he was the Chief Forester of the United States Department of Agriculture, or Secretary of the Interior Department; I think he was connected with the Forestry Department of the United States. (3379.)

Mr. DEY. When did he leave that position?

Mr. MCCULLOCH. May 1st, 1928.

Comr. MCMANAMY. Have you any more witnesses, Mr. Spencer?

Mr. SPENCER. No. I have two or three exhibits I would like to introduce.

Mr. MCCULLOCH. That association has its principal office in Seattle, Washington.

Mr. SPENCER. I desire to offer as an exhibit in this case the testimony of Warren D. Smith, appearing in the former record in case No. 14,392, page 565, line 16, to page 574, to line 23, inclusive, with exhibit No. 24, which was referred to on the cross-examination of the witness Smith, and was an analysis of Alkali Lake by him. (3380.)

1864 (Thereupon the excerpt from testimony of Warren D. Smith and the copy of Exhibit No. 24 in Docket No. 14393 was received in evidence, marked "Defendants' Exhibit No. 95.") (3382.)

Mr. SPENCER. I also desire to introduce in evidence transcript of the testimony of T. H. Foley, taken upon the previous hearing of this case, Docket 14392, pages 603 to 624. Mr. Foley is dead, has died since the last hearing of the case.

(The transcript of excerpts from testimony of T. H. Foley given in hearing in Docket No. 14392 was thereupon received in evidence, marked "Defendants' Exhibit No. 96.")

Mr. SPENCER. I desire to introduce in evidence testimony certified to by the secretary of the Interstate Commerce Commission, from Finance Docket 2613, given by Witnesses C. J. Smith, C. F. Swigert, and H. H. Corey.

Exam. ROGERS. Relating to what?

Mr. SPENCER. Relating to the cross-State line and the character of the country traversed, given at a hearing in the so-called Central Pacific case before the Interstate Commerce Commission at Washington, D. C., in Docket No. 2613, in the (3383) matter of the application of Southern Pacific Company to acquire control by lease and by stock ownership of Central Pacific Railway Company, the original of which is now on file and of record in the office of the commission. (3384.)

(The certified copy of excerpts from testimony of C. J. Smith, C. F. Swigert, and H. H. Corey was thereupon received in evidence, marked "Defendants' Exhibit No. 97.") (3385.)

1865 Mr. SPENCER. I also offer in evidence from the previous record, Docket 14392, the testimony of A. R. Olsen, called by the petitioner in the previous case. (3386.)

(The excerpt of testimony of A. R. Olsen given in hearing in Docket No. 14392 was thereupon received in evidence, marked "Defendants' Exhibit No. 98.")

1866 GEORGE W. BOSCHKE was thereupon produced as a witness on behalf of defendants, and, having been duly sworn, testified as follows:

Direct examination:

I am chief engineer of the Southern Pacific Company, Pacific system (3387), and as such I have active charge and direction of all new construction carried on by the Southern Pacific Company. I have been associated with the Southern Pacific Company and allied companies since 1886. Formerly, during the régime of the Harrison lines, I was chief engineer of the Oregon-Washington Railroad & Navigation Company and the Southern Pacific lines in Oregon at the same time.

The map you show me marked 21240 was prepared under my direction. It is a map of a part of Oregon, California, and Nevada, showing railroad development, dated July 7, 1928. The dotted yellow is the proposed cross-State line, I. C. C. Docket 19680; the solid red line, constructed Southern Pacific lines; the dotted red, proposed Southern Pacific line Klamath Falls to Alturas; dotted yellow and red, the Oregon, California & Eastern Railway; jointly owned by the Southern Pacific and (3388) the Great Northern; the solid yellow line of the Great Northern line from Bend to Chemult; the yellow crossed and red crossed is the Southern Pacific line Chemult

to Klamath Falls, used jointly with the Southern Pacific and the Great Northern.

(Said map was thereupon received in evidence, marked "Defendants' Exhibit No. 99, Witness Boschke.")

I know what the Alturas line, which has been referred to in the testimony in this case quite frequently, is. The so-called Alturas route is a line from Klamath Falls to Alturas, which would form part of a through line from Portland to Ogden, and in addition to the part from Klamath Falls to Alturas, the Nevada, California, and Oregon Railroad between Alturas and Wendel makes
1867 up the rest of the line from there on, and from Wendel on to Fernley, Nevada, the branch line, the Fernley-Lassen branch of the Southern Pacific. Fernley is a station on the main line of the Central Pacific (3389) between San Francisco and Ogden.

Each of the elements making up this route between Alturas and Wendel was authorized by the Interstate Commerce Commission some two years ago. One of those elements was the permitting of the Southern Pacific, or the Central Pacific and the Southern Pacific Company, to acquire control, by stock ownership, of the Nevada, California & Oregon Railroad Company.

The line has been standard-gauged from Wendel to Lakeview since that authority was granted, in the way of expenditure of money upon the so-called N. C. O. It was formerly a narrow-gauge railroad. For the rehabilitation about $2,400,000 has been expended in that work on the N. C. O. That, of course, doesn't include the purchase price. I don't recall what the purchase price was. I don't think all of the money has been paid yet, but it is about a million—I don't know really just (3390) what it is. It is given, anyway, in the commission's decisions; it is in the records there.

Q. Now on that part of this route between Klamath Falls and Alturas, what has been done, what is being done, and what are your instructions with respect to the remainder of it?

A. I have just completed the connecting up of location, the definite location, between Alturas and Klamath Falls, and contract has been let on the first 12 miles out of Klamath Falls, with the provision that the grading be completed by the end of September, and I expect to let the contract just as soon as I can get the data together necessary for the balance of the line through to Alturas, about the end of September, and have the line completed the latter part
1868 of May or early in June of next year; depending upon weather conditions during the winter. I hope to get across there, if possible, if the weather conditions permit at this end. We cross through Tule Lake, and if we can get through that country this winter before the rains start, the rest of the work I am satisfied I can carry on all the winter.

The Southern Pacific owns an interest in a line running up to Lakeview. (3391.) That is part of the N. C. O.

Mr. DEY. The N. C. O. extended from Wendel to Lakeview, and the Southern Pacific Company has purchased it.

The WITNESS. All of that rehabilitation will be entirely completed through to Lakeview by the end of this month. It has been in operation through to Lakeview for two months.

The expenditure involved in the construction between Klamath Falls and Alturas is estimated six million dollars, 98 miles to construct, and from Alturas to Wendel is 100 miles.

The purposes in acquiring the N. C. O. and constructing the Alturas were to give us a line for through business for the east from Oregon, from practically all of Oregon, at least the northern part of it, all of Oregon that is served by Southern Pacific lines, together with such traffic as they may gather in Oregon from connecting lines. (3392.) That is, this line was designed as a new through route on east and west through business moving to and from western Oregon and to and from Klamath Falls, and in addition, to develop such local traffic as could be developed along the line.

My instructions with respect to the speedy completion of this line are to complete it as soon as possible, consistent with economical construction.

As to the character of this route between Klamath Falls and Alturas, it would be practically a level grade for the first 40 miles out of Klamath Falls, through a farming country, and
1869 then across Tule Lake, which is also developing farming. And then we have about 30 miles of rolling grade, one per cent maximum, to the summit, and then we have about four and a half miles of 2.2 per cent grade descent towards Ogden, which will be with the traffic. (3393.) This is going to be a secondary main line. On the first 40 miles out through the flat country we are going to lay a 75-pound rail, and from there on 90-pound, on to Alturas.

Q. You spoke of crossing Tule Lake.

A. Lake bottom, I should say. It is not a lake any more.

Q. Yes. Just describe what sort of land you run through there.

A. Well, very, very rich land. Where there is water on it, it produces enormous crops. It is an old lake bed, where the lake has disappeared by evaporation and use of the——

Exam. ROGERS. Are you building this Klamath Falls-Alturas line, with a view to developing primarily that territory and serving it, or as a shorter line to the east?

A. Well, I might say both. The N. C. O.——

Exam. ROGERS. Which is the moving or prime factor?

A. For a through line.

Comr. MCMANAMY. You say you have a 2.2 grade?

A. There is a short piece of 2.2 dropping down from the plateau into the Pitt River drainage. But that is with the business, with the loads. It is about 4½ miles. (3394.) That is on this line, the new line.

As to the grade coming out of that valley to the south and east: From the foot of this 2.2 grade we have about 22 miles to Al-
1870 turas of flat country, rolling grade, water grade line; then from Alturas going on the N. C. O. we have about 21 miles of

level grade there, practically all tangent, one or two very light curves, to Likely, which is at the foot of the hill, with a 2 per cent grade, as I remember about eight miles long. That is getting up to the high lands in the Sierra Nevadas. Then we drop down on the 2 per cent grade for about six or seven miles, and then we run across a flat, across Madeline Plains for 23 miles, level grade.

Q. (By Mr. DEY.) What kind of ties are you putting into this new line?

A. Well, we will use probably—it is not decided by the operating department yet just what they will use. What they would like to have is creosoted ties, but we will probably use every other tie alternating with creosoted and untreated ties, then as the untreated come out, why, the creosoted will go (3395) on for a long life.

The distance from Wendel to Fernley is 82 miles.

Q. Now, you had charge, Mr. Boschke, of the construction of the last work on the Natron cut-off between Oakridge and Kirk, 108 miles, did you not?

A. Yes; from Black Butte to Crescent Lake.

Q. Yes. Well, there has been considerable testimony here in this case about building lines through the Cascade Mountains, and from Douglas County over, from Jackson County over and through what is called the Hogg Pass up above the headwaters of the Santiam, over to Bend, and I wish you would state for the information of the commission now just what it did cost to build up the Cascades there between Oakridge and Kirk.

A. I have those figures. Oakridge to Kirk, $18,849,246.00.
1871 That is an average cost of $174,093 per mile all the way through. That includes some 40 or 50 miles from the Summit down to Kirk, which is practically level.

As to the cost of that part of the mileage from Oakridge to Cascade Summit, which puts us through the long tunnel and up in to the plateau (3396), that is practically 40 miles, and it cost $359,000 a mile average cost. Some miles were much more expensive, though, than that. Some miles ran $550,000 a mile.

The total expenditure in the Natron cut-off and the Black Butte cut-off is $40,203,168. This Alturas line is a continuation of the Natron cut-off from Klamath Falls east. We built the Natron cut-off line to avoid the Siskiyous and two other summits between Portland and the summit of the Siskiyous. It shortens the line through with the Black Butte cut-off; in the actual distance it shortens the line to San Francisco or Sacramento 24 miles in actual distance, and saves as high, a [illegible] recall it, as 2,800 feet of grade climb in both directions and some 20,000 degrees of curvature.

Exam. ROGERS. Was the old line through Roseburg handling its maximum tonnage at the time you built the Natron cut-off?

Mr. DEY. I will have an operating witness on that phase later, although if Mr. Boschke knows, of course he may answer. (3397.)

Exam. ROGERS. If he knows he may answer; if he doesn't know, all right.

The WITNESS. Well, we double-tracked the Sierra Nevada Mountains two and a half years ago——

Comr. MCMANAMY. I think you got the question wrong. He referred to the Siskiyous and not the Sierra Nevada.

The WITNESS. Oh, I beg your pardon.

1872 Exam. ROGERS. The old line.

The WITNESS. Oh, the old line. I don't know. I don't think it had reached its maximum at all.

As to whether the Natron cut-off was built in order to serve the territory through which it runs, or as a shorter, more economical line, I think it is a more economical line. That was started many years ago. It was Mr. Harriman's idea to build that. I think that is what he had in mind, a matter of economy and to develop the country, and get a better outlet to the east for Oregon——

Exam. ROGERS. Well, in building from Kirk to Oakridge did you have in mind developing the country, or making a saving in operating expenses in handling western Oregon traffic?

A. Well, I don't know what the original intention was when Mr. Harriman planned to build that line, but I should judge it was for the purpose of opening up that timber that we passed through, and also making a more economical line to (3398) take the business out of Oregon east.

Exam. ROGERS. What was the purpose of closing up the gap between Kirk and Oakridge? That was during your time, wasn't it?

A. Yes.

Exam. ROGERS. The other was during your time too?

A. Well, there was a long-time litigation that was settled with the Central Pacific; then we went ahead with the construction. But if there had not been any litigation, I imagine the line would have been built a number of years ago. It was originally intended for a line east, connecting with the Modoc Northern. The Modoc

1873 Northern was planned in 1907, or thereabouts, shortly after construction was started on the Natron cut-off. When I refer to the Modoc Northern, that means the Alturas line. As to whether the Modoc Northern is no longer in existence, the original Modoc Northern surveys went down through Westwood, but by building across to Alturas the distance is (3399) practically the the same whether we went through Westwood or through Alturas; so the Alturas line—that is, the N. C. O.—was not self-supporting but it had developed some business on its line, and my thought was that with the through business and such business as it had developed that by standard gauging some more would probably develop around Lakeview and between Lakeview and Alturas, and it would be our best route to go out, and we would pass through large timber holdings between Klamath Falls and Alturas.

Exam. ROGERS. I don't know whether you can answer this or not, Mr. Boschke, but is there anything to speak of handled over this Cascade line now other than the eastbound traffic from western Oregon?

A. Well, I dont know about that.

Q. (By Mr. DEY.) Well, do you know, Mr. Boschke, there is just one sawmill that has gone in there at West Fir?

A. Yes.

Q. Two and a half miles from Oakridge?

A. Oh, yes. All the business we get comes out of western Oregon.

Q. What the examiner wants to know is whether or not that line has developed any local business?

A. Local business?

Q. Yes; between Oakridge and Kirk.

A. We get some out of West Fir. But there is no milling going (3400) on in the timber that is susceptible of being opened
1874 up. There is nothing going on in there between Oakridge and the summit.

Exam. ROGERS. What I am getting at, Mr. Boschke, is if the traffic is taken away from the Southern Pacific and turned over to the cross-State line at Crescent Lake, that is the eastbound traffic, what will be left for this so-called Natron cut-off to handle?

A. Well, I am not an operating man, and I would not expect that we would short-haul ourselves east when we have got lines going east.

Exam. ROGERS. That was not the question. I didnt ask you about the short haul. I want to know what would be left for the so-called Natron cut-off if you take this western Oregon traffic which Mr. Newell proposes and give it to the cross-State line?

A. Well, I can't say. I don't know how that traffic moves.

Q. (By Mr. DEY.) Well, it would still have the California business?

A. It would have the California business, yes.

Q. And such business as originates between Crescent Lake and Klamath Falls?

Mr. ELLIS. You would have a whole lot more than that, I think, Mr. Dey. I think Mr. Wiggins' exhibit will show you will still have the major part of this tonnage north and south bound. Eastbound is only a small part of the total tonnage handled by the Southern Pacific over the Natron cut-off. (3401.)

Mr. DEY. It will have left the north and south business to California, and it will have some local logs, and one thing and another, into Klamath Falls mills.

The WITNESS. Yes, sir; that is all.

1875 I had something to do with the construction of the line down the Malheur Canyon between Ontario and Crane.

Q. When you were with the O.-W. R. & N.?

A. That is quite a few years ago now. I think I built that from out about—I built it out to Riverside, as I remember it; maybe it was down below there. I don't remember. I built it from Vale to Riverside.

As to whether Mr. Buck was working under my jurisdiction when he made that survey: Mr. Buck was with me on certain locations.

No; I don't (3402) think he was working—well, he might have been working for me. He did work for me at some time. But I think he worked for the Short Line, and they made some surveys over in that country and across the country.

As to whether I know anything about this central Oregon desert country: I know when I was chief engineer of the O.-W. R. & N. lines in Oregon, we made a good many studies to see whether we could find any reason for building a line there. I have been through the country. As to whether in my judgment it did then, or does now, give any prospects that would justify the construction of this proposed cross-State line: It is a long time since I went through there. It might be a Garden of Eden now, but it wasn't when I was through there. When I was through there it was quite a desert. You would see a few people trying to make a living and they would finally get starved out and leave. Little patches of rye is about all I ever saw there.

I know Dr. Reddy of Medford. (3403.) The doctor has been trying to get me to help him build railroads for a long time.

The surveys were started by the Southern Pacific out of Drain to Coos Bay in 1905, and construction was started out of
1876 Drain in August, 1906, and the work proceeded until March, 1907, when the Drain line was abandoned. Survey started out of Eugene to Coos Bay in June, 1911, and construction started out of Eugene in December, 1911. The line was completed and put in operation to Marshfield on August 1st, 1916.

I have heard of the MacArthur-Perks people. They had not come into this country prior to the time the Southern Pacific actually started its line from Coos Bay to Drain. That was a number of years afterwards. I was not directly connected with that construction to Coos Bay, but the traffic people thought that the line from Drain would not serve the country as well, or develop as much country as the line built out of Eugene.

Q. And that is why the change was made from Drain to Eugene?

A. After talking it over a long time, then it was finally (3404) decided we would build on that route.

Q. Did you ever tell Dr. Reddy that the Southern Pacific Company only undertook to build to Coos Bay because MacArthur-Perks came out here and started it off?

A. I never discussed the line to Coos Bay with Dr. Reddy at all. The only line that we talked about was going over to Crescent City, over there to the mines.

As far as I know MacArthur-Perks did not influence the Southern Pacific into actual construction of that line at all. They started to build the line before those people were ever heard of.

The line from Drain was abandoned because the traffic department, as I remember it, of the O. R. & N. did not agree that was
1877 the proper place for the line to go. They thought it ought to start out of Eugene and go down through and develop the farming country.

Mr. DEY. Drain is a few miles south of Eugene. They started from Drain and then decided to start from Eugene.

The WITNESS. The physical difficulties there were not greater than they were along the route out of Eugene; it was a more expensive line by way of Eugene. I don't know exactly how much of that line was completed. There was some tunnels (3405) started and some steel bridges put in on the wyes, and I don't remember how many miles, but there was some little work done on it, but no very large amount of money invested.

As to what the map you show me is: The caption is, "Relief map of the State of Oregon, made by the Oregon bureau of mines and geology; scale, approximately 12 miles to the inch." There is a legend showing that the red lines are Southern Pacific; yellow, Union Pacific; blue, Northern Pacific, Great Northern, S. P. & S., and Oregon Electric; brown shows various short lines to logging railroads.

(Said map was thereupon received in evidence, marked "Defendants' Exhibit No. 100, Witness Boschke.")

They show some water in some of these lakes that I don't think is in there now. I understand some of these lakes are dried up. Silver (3406) Lake—I don't know from my own knowledge.

Mr. DEY. I might say the only purpose in introducing that exhibit is to give a little different picture of the State than is shown on the ordinary map.

Q. Do you vouch for the accuracy of this map, more than to say that it is a photograph of a relief map?

A. Yes; I don't know anything about its accuracy. I know the coloring of the lines on there, I think are shown correctly of the different railroads.

1878 Cross-examination:

No; I don't think I am familiar with the history surrounding the construction of the Oregon branch lines of the Southern Pacific Company. I was on the construction of the line from Redding to Ashland. That is the first work I was connected with there. No, you are not to understand from my testimony that the Southern Pacific Company was the originator of the extension to Coos Bay, and that it did not go in there because some one else started to Coos Bay first; I never heard of it at all.

I never heard of Ralph Hunt or of the Lane County (3407) Asset Company.

Q. Do you know whether or not the Southern Pacific Company actually bought a portion of its right of way and its survey west of Eugene of some other company?

A. As I said in my testimony, I was the chief engineer of these lines here at that time of the O. R. & N., but I happen to know that there were some people that made some surveys at strategic points. For what purpose, I don't know, unless it was to hold us up. They had not made some surveys and let some contracts for construction

west from Eugene before the Southern Pacific had ever gotten its right of way. Twohy Brothers did the first work on that line, and they commenced to tunnel about 20 miles out of Eugene and worked towards Eugene. I think Porter Brothers did do a great deal of the work on the Coos Bay branch. I was not connected with that, only I knew from numerous hearsay what was going on.

Q. But you do know some one else was in the field ahead of the Southern Pacific Company there, and they had made surveys and had taken some steps towards construction of a line?

1879 A. You mean before they started out of Drain? No. (3408.)

Q. About the time you were starting from Drain?

A. No; I came to the O. R. & N. in 1905. That is the time when they were making the survey south of Drain, and it must have been way along in 1909 or '10 before I heard anything about some people making surveys down through that country.

I don't know what was the occasion for the long delay from the time I first made my survey from Drain until I actually got a line into the Coos Bay country. As I said, I was not connected with the line. I know that Mr. Hood objected strongly to changing and going out of Eugene, because it was a longer line and cost more money, and a harder line to maintain, more expensive line to maintain.

I haven't in mind the exact mileage of the Alturas line from Klamath Falls to Alturas, but it will be between 97½ and 98 miles from where we leave the main line, the present main line, which is 2 miles east of the Klamath Falls station. From Klamath Falls station to Alturas will be 100 miles. The estimated cost of construction of that line is six million dollars.

I gave some figures of the cost of the (3409) Natron cut-off, particularly west of the Cascade Summit. I can not state what the cost per mile was from Cascade Summit to Kirk; I haven't that cost separated but I should imagine that ran somewhere around $70,000 a mile, an average. The first part of it out of Kirk for 40 miles cost about $49,000 a mile, as I remember. I have about 4½ miles of tunnel on the Natron cut-off.

The standard gauging of the N. C. O. line to Lakeview was not necessary to handle the traffic that was offering to the line at the time I took it over. We had in mind the connecting up of the line (3410), the line from Klamath Falls across. I had in mind also the development of additional tonnage that might result

1880 from change from narrow to standard gauge, that I think will develop. In fact, I personally think that that is one railroad we built we are pretty sure we can earn our keep on it. Some of them are doubtful, but I don't have much doubt about that line supporting itself. As to what particular portion, in my mind, of the western Oregon tonnage going east will be routed via this new north and south line which I say I am constructing, I think as far south as Roseburg it would pay to backhaul it up to Eugene. I

don't think there is any question at all that all eastbound tonnage from points as far south as Roseburg would be routed over the Modoc Northern. It is the economical way to take it. It would move to Eugene and then over the Natron cut-off. You see, the Natron cut-off is rather a favorable (3411) line when you come out of Oakridge on practically a water grade line, and then we have 40 miles of one-eighth grade, then practically downhill; it is downhill all the way to Klamath Falls, and one per cent then.

Redirect examination:

When I say a line that will earn its keep, I mean it will earn its keep with the through business and the business that develops on the present N. C. O., and the business that will develop between Klamath Falls and Alturas; then we will earn our keep. It will take, in my judgment, all of those elements to justify it. I don't know that those were all fully covered in the previous case, when the application was sought for the carrying out of this line or route. I suppose so. Plans were made that way long ago. (3412.)

1881 PORTLAND, OREGON, *August 22, 1928.*

J. P. DELANEY was thereupon produced as a witness on behalf of defendants, and, having been duly sworn, testified as follows:

Direct examination:

I am connected with the office of the auditor of the Southern Pacific Company in San Francisco.

I have prepared a statement showing the investment and financial history for the past several years of the Southern Pacific Company's lines in Oregon. The statement which I have is a statement prepared by myself. It correctly reflects the investment and earnings of the Southern Pacific Company's lines in Oregon. (3413.)

(The statement, consisting of one sheet, was thereupon received in evidence, marked "Defendants' Exhibit No. 101, Witness Delaney.")

Exhibit No. 101 shows the result of the operation of the Southern Pacific Company's lines in Oregon for the calendar years 1916 to 1927, inclusive. The revenues and expenses were taken from our annual report to Public Service Commission of Oregon. These revenues and expenses were compiled in accordance with the rules and regulations of that commission.

The exhibit also shows taxes, equipment, and joint facility rents and uncollectible railway revenues, which items are deducted from the net revenue thereby producing the item net railway operating income upon which the rate of return is figured. It will be noted that the rate of return for any of the years did not reach 2 per cent. The highest was 1.81 per cent, in 1917. The years 1920 and 1927 both show losses. From this it will be seen that the rate of return on Oregon investment is far short of the 5¾ per cent, which has
1882 been considered a fair return at the present time. Just (3414) how much the net railway operating income for Oregon is

short of 5¾ per cent on Oregon investment is shown three lines down from the rate of return. For the year 1927 the amount was $8,525,297.

The averages per mile of road are also shown on this exhibit at the bottom. The operating revenues per mile of road for Oregon for 1927 were $13,108.90, operating expenses $11,914.23, net operating revenue $1,194.67, net railway operating income nothing. This rate of return is based on the book value. While the operating revenues increased from $9,087,773 in 1917 to $18,457,230 in 1927, or 103 per cent, operating expenses increased from $7,401,331 in 1916 to $16,722,331 in 1921, or 126 per cent; and taxes increased from $622,430 in 1916 to $1,659,290 in 1927, or 166 per cent.

The property investment shown on this exhibit represents the book value of our lines in Oregon plus a proportion of the equipment owned by the Southern Pacific Company and its leased lines on the Pacific lines based on the mileage made by the various classes of equipment in Oregon to mileage made on entire Pacific lines.

If this investment in equipment were excluded the rate of return for each year would be 1916, 1.21 per cent; 1917, 2.01 per cent; 1918, 1.40 per cent; 1919, 1.75 per cent (3415); 1920, nothing; 1921, .94 per cent; 1922, 1.75 per cent; 1923, 1.97 per cent; 1924, .99 per cent; 1925, 1.07 per cent; 1926, .07 per cent, and 1927 nothing, instead of the per cents as shown on the exhibit.

This property investment of 142 million odd dollars includes all of the operating properties in Oregon operated by the Southern Pacific Company. That includes, for 1927, the Natron cut-
1883 off, or Cascade line from Natron to the State line south of Klamath Falls, title to which is vested in the Central Pacific Railway Company. For 1926, there is a note at the bottom of the statement that shows how much we left out on account of closing the gap between Natron and Oakridge, or between Oakridge and Kirk. As to what I mean by having left out something; that line was under construction during those years, and we were not operating over the complete distance between Kirk and Oakridge—in the year 1927 we were operating and therefore that is all included. (3416.)

I have prepared a similar statement covering, however, the Southern Pacific Company's Pacific system. And the figures shown thereon are of the same accuracy as the other statement with respect to which I have testified.

Exhibit No. 102 shows the operations of the Southern Pacific Company—Pacific lines for same period as shown for the State of Oregon, It covers the lines extending to Portland, Ogden, and to El Paso up to and including the year 1923; subsequent to 1923 it includes the El Paso and Southwestern Railroad and Arizona Eastern, which were taken over by the Southern Pacific Company in latter part of 1924.

This exhibit shows the operating ratios, property investment, rate of return and averages per mile of road, similar to exhibit

for State of Oregon. It will be noted that operating revenues, expenses, net revenue, and net railway operating income per mile of road, is greater than that shown for the State of Oregon.

The purpose of this exhibit is to show that the rate of return for the years indicated has not reached 5¾ per cent, which is considered a fair return. (3417.)

1884 On both of these statements I have used the company's book value. As to how that compares with the tentative valuations put out, I think the tentative valuation of the commission was less than the book value, but that the company's valuation was approximately the same figure as our book value. I don't know how much less.

(The statement, consisting of one sheet, was thereupon received in evidence, marked "Defendants' Exhibit No. 102, Witness Delaney.") (3418.)

Cross-examination:

Q. (By Mr. ELLIS.) On Exhibit 101 can you state precisely the basis of the apportionment of revenue and expenses to the State of Oregon, as used in Exhibit 101?

A. Well, the intrastate revenues are allocated directly to the State, and the interstate revenues are on the basis of mileage in Oregon as compared to the mileage on the Pacific lines, and pro rated on a strictly mileage basis.

Q. And the expenses are charged where incurred?

A. They are localized as far as possible to the State of Oregon; otherwise it is on a mileage basis.

Q. Then on the intertate traffic the cost of originating the traffic, terminal expenses, would be charged to Oregon and it would get a straight pro rate on the total mileage haul?

A. On the revenue, you mean?

Q. Yes; on the revenue.

A. Yes.

Q. Then, to illustrate that situation, on a car of lumber originating at Klamath Falls and destined to Chicago, the expense of originating that car and hauling it to the California line would be included in the Oregon expenses?

1885 A. Yes; it would.

Q. And the revenue assigned to Oregon would be the proportion which the miles from Klamath Falls to the California line (3419) would bear to the total mileage from Klamath Falls to Chicago?

A. No, it would not be to Chicago. Did I say expenses to Chicago, in the first place? No; the expenses and revenues would go as far as our line went and be divided on that basis.

Q. Yes; that is correct. But in almost the same degree it would apply on through to Chicago, wouldn't it, with the exception that some other line would get a part of the revenue from there on?

A. Well, our revenues would be only pro rated to Oregon on the basis of the amount we got out of the haul.

Q. Well, that would result, would it not, in red-inking Oregon for every car of lumber that was originated near the California line for Chicago, or practically all of the Klamath Falls tonnage?

A. Well, it might in one way. It might not in another way. Take on an interstate shipment, you would get all the revenues and be charged all the expenses.

Q. It would actually cost the State of Oregon, under this system, more to originate the lumber traffic at Klamath Falls than the total revenue that is credited to Oregon for that lumber traffic?

A. It might, yes.

Q. Oregon is a heavy tonnage originating State, is it not, so far as Southern Pacific operations are concerned?

A. Well, it is quite heavy, but I don't think it is anywhere (3420) near as heavy as California.

1886 Exam. ROGERS. Well, do you know about this traffic originating now, or are you just from the auditor's office?

A. Well, we have our reports which show how much traffic is originated in Oregon, the Public Service Commission reports.

Q. (By Mr. ELLIS.) There is very little bridge haul traffic on the Oregon lines of the Southern Pacific, isn't there?

A. What do you mean, in Oregon?

Q. In Oregon.

A. Well, if I remember correctly, I think the average haul in Oregon is about 111 miles in 1927.

Q. That would indicate that the greater percentage of the traffic originated in Oregon and that a small per cent was bridge traffic passing through the State, so far as your lines were concerned?

A. Well, let's see. Bridge traffic would have to go right across the State, is that what you mean?

Q. Yes.

A. Well, I guess it would be mostly originating traffic.

As to whether in the investment shown, or used as a basis for Exhibit 102, the Southern Pacific's investment or properties in old Mexico are included (3421): In Exhibit 102 there is no investment there included. It just extends, as I say, to Portland, Ogden, and to El Paso, and includes the Arizona & Eastern, and the El Paso & Southwestern since 1924.

Q. Did you include only operating property?

A. 701 and 702, and then on the Southern Pacific Company lines as a whole, on Exhibit 102, I believe it is, there is material and supplies in there, account 716, but there is none for Oregon, none in the Oregon statement.

Q. But you are sure you included no strictly non-operating property?

1887 A. No; just accounts 701 and 702, and 716.

Q. (By Mr. MCCULLOCH.) Mr. Delaney, is this Exhibit 101 a statement or a compilation that is regularly kept by the au-

diting department of the Southern Pacific Company for Oregon lines, or was it specially prepared for this case?

A. The revenues and expenses are made in an annual report to the public service commission.

Q. Yes; I know that, but is this statement, the tabulation (3422) constituting Exhibit 101, one of the tabulations that is regularly kept by the auditing department of the Southern Pacific Company?

A. Do you mean do we make this statement every year?

Q. Yes.

A. No. The revenues and expenses are in our reports every year, but when we are asked to make the statement we just draw the revenues and expenses off the reports and bring the other figures up to date.

Q. That is what I wanted to bring out. This statement 101 was specially prepared for this case? You didn't have it on file when it was requested?

A. Why, no.

Q. In this form?

A. Not just in this particular form, no.

As to whether we have on file, or keep regularly, similar tabulations for the results of operation of Southern Pacific Company's lines in other States, Nevada, Utah, California, Arizona, New Mexico, and so on, we make a report of revenues and expenses, something like the annual report to the Public Service Commission of Oregon.

As to whether my company hauls any empty cars north from California for loading with lumber in Oregon, I guess they
1888 do. I am not quite familiar with that part. (3423).) If an empty car were hauled north from San Francisco to Klamath Falls for loading with lumber under the method of allocating revenues and expenses to the lines in Oregon, the cost of that empty car haul would be pro rated on the mileage within the State of Oregon. It would be in trainloads and everything else.

If I made up, or had made up, a statement in the form of Exhibit 101 for the lines of the Southern Pacific in California, I could not tell you what results it would show with respect to rate of return on investment. That would be—it is quite a job to make up that annual report every year. As to whether we ever made such a statement for the California lines, we make an annual report to the California Railroad Commission, but it is on a train mile basis. You just simply take the train mile per cent of the total system figures and work it out that way.

As to whether if I know what a statement or tabulation in the form of Exhibit 101, which was for the Oregon lines, would show as to rate of return on investment, if it were made for the Southern Pacific Company's line in Nevada or Utah (3424), I have not made such calculation. I don't know what such a compilation would show for operations of the Southern Pacific in Arizona or New Mexico or Texas. We make a report which shows the revenues and expenses only.

Exam. ROGERS. Mr. Delaney, the tentative valuation of the commission of the Southern Pacific Company was something like $792,000,000, wasn't it?

A. I don't recall what the figures were.

Exam. ROGERS. If that is true, the difference would be in the neighborhood of $375,000,000 between the valuations you have shown and the tentative valuation?

1889 A. The 1916 figure?

Exam. ROGERS. Well, the valuation basis.

A. That is about 792 million?

Exam. ROGERS. Yes; something like that.

A. What would that cover, all the Southern Pacific lines or just the Pacific lines?

Exam. ROGERS. What do you include in the Southern Pacific Company that is not in the Pacific lines, what territory? (3425.)

A. Well, the Texas and the Louisiana lines, and the steamship. Those lines, lines in Texas and Louisiana, we call them, and the steamship lines running from New York to Galveston and New Orleans.

Exam. ROGERS. As I understand, this figure as given does not include those lines?

A. Yes. That does not include equipment, though, does it? 792 million, does that include equipment?

Redirect examination:

Q. (By Mr. DEY.) Mr. Ellis asked you about bridge traffic, Mr. Delaney, and by that I assume that he meant traffic which passes over the Southern Pacific lines through the State of Oregon, not having been picked up in the State or laid down in the State. Now, is it not a fact that there is a large volume of traffic that moves from California and south to points in the Northwest beyond Oregon?

A. Yes; I guess there is. I have no definite information of that. (3426.)

1890 F. L. BURCKHALTER was thereupon called as a witness on behalf of defendants, and, having been duly sworn, testified as follows:

Direct examination:

I am first assistant general manager of the Southern Pacific Company, with offices in San Francisco. Have been associated with this company about 28 years. I am a civil engineer by education and profession, but for 14 years have been in the operating department. In the operating department I cover the Pacific lines, reaching from Portland to El Paso and Tucumcari and Ogden. I am assistant to the general manager, and we carry on the duties of the general manager's department. We handle the operation through two assistant general managers. There are three different districts, the northern district, the southern district, and the eastern district. (3427.)

And they, through the superintendents, and on down, operate the road.

In Oregon I was connected with the Portland division for about 7 years, 3 years as district engineer, and the 4 years following as division superintendent, and I have since been assistant general manager of a district in which the Portland division is located—the northern district, which extends from San Francisco to Portland and Ogden and south to Fresno; and more recently I have been first asst. general manager, still having jurisdiction over this part of the lines; so I have been officially connected with the division since 1911.

By Portland division I mean the lines from Portland to Crescent Lake and Ashland. The lines from Crescent Lake south on the Cascade line and from Ashland south on the Siskiyou line are in the Shasta division. This runs as far as Gerber, California. From there on it is the Sacramento division—to Davis and to Sacramento. (3428.)

1891 The bridge traffic of the Southern Pacific Company moving between Portland and California, is moved over the new Natron line via Crescent Lake and Klamath Falls. The local traffic going to California or beyond, which includes Ogden, north of Divide is handled through Eugene and Crescent Lake; south of Divide the traffic going to Ogden is handled via Ashland and the Siskiyou Mountains.

The traffic that is local to territory Eugene to Black Butte is moved via Eugene—I mean moved via Roseburg or Klamath Falls. in accordance with a tariff with the traffic department has filed, which goes into a great deal of detail—that is, the business that is local to that territory and close-by points in California. Anything where the local rates are not affected and it is only a matter of company convenience, we are hauling the business from north of Divide to Ogden via Crescent Lake and south of Divide through Ashland.

Divide is about 27 miles south of Eugene, and is the summit of the drainage between the Willamette and the Umpqua Rivers. (3429.) From Divide southerly the railroad drops off quite rapidly down to the Umpqua drainage.

Comr. McMANAMY. The distance from Divide to Ogden is substantially the same either way, is it not?

A. Practically so, yes. The Cascade line is about 24 miles shorter——

Comr. McMANAMY. From Eugene?

A. From Black Butte to Eugene, than the Siskiyou.

Comr. McMANAMY. The distance from Eugene is 27 miles to Divide?

A. Yes; there is very little business, I might say, between Divide and Roseburg. It is mostly a canyon, hilly country there, and there is very little business on that part of the line.

I was a witness in the Klamath Basin cases.

1892 Q. And prior to the determination with respect to the construction of the Alturas line, did you have occasion to study the entire situation so that you then had, and now have, some definite idea as to how you expect the traffic to move from an operating standpoint after the competition of the Alturas cut-off?

A. I have.

Q. Now, will you describe such plans as you think will become (3430) effective?

A. The Alturas cut-off will afford a shorter route for all traffic originating or destined north of Klamath Falls, on the one hand, and east of Fernley, on the other hand, and will also afford a shorter route for traffic out of northern California moving between Ogden and points in northern California. We figure that lumber originating as far south as Dunsmuir, or more particularly Mt. Shasta, because there isn't any between Mt. Shasta and Dunsmuir of any consequence, will go east via Klamath Falls, because it will find a shorter route. The distance from Black Butte to Fernley via Roseville is 409 miles, and via Alturas is 368 miles. Black Butte is the divide between the Sacramento River and the Klamath drainage—the line drops off coming north from there and going south—so we can haul business from about Dunsmuir around to Klamath Falls to advantage going to Ogden. I haven't mentioned what little local business there might be that would be affected by the route, but I think that answers your question as to the through business.

I expect the Alturas line to be completed about May of next year. It is expected that this line will be able to carry the traffic from the territory that I have described, yes. (3431.)

The most important item of perishable freight originating on our lines in Oregon is the fruit traffic out of the Rogue River Valley, consisting mostly of pears and apples. It is now moving
1893 to Roseville and thence east. Following the construction of the Alturas cut-off the Alturas route would afford a route that is 41 miles shorter than the route through Roseville, from any point north of Black Butte, which, of course, includes all of the Rogue River Valley—any point north of Black Butte up to or pretty close to Eugene. The perishable traffic originating in the Rogue River Valley has grown considerably in volume in (3432) the last few years, and if it attains a volume that would justify it moving via Alturas and we felt we could better the time appreciably, why, we would be glad to move it that way.

The schedule on the Rogue River fruit to-day from Medford to Chicago is 188 hours. That consists of 31 hours Medford to Roseville and connection with fruit block out of Roseville, and I have allowed 3 hours at Roseville, which I think is a liberal and fair allowance. After leaving Roseville, the fruit is on the 154-hour schedule for fruit and vegetables Roseville to Chicago, and we are running those trains most of the time considerably ahead of time. We have a very large movement of perishable traffic east from Rose-

ville. (3433.) It consisted in the year 1927 of 1,600 fruit blocks, containing 71,849 cars. We generally deliver these blocks comfortably ahead of time to the Union Pacific at Ogden, and they have the advantage with nearly every one of these blocks of getting it ahead of time, and on a very few occasions we have delivered the trains late on schedule to them, and they have in those cases almost invariably made up the time——

In 1927, out of the 1,600 fruit blocks only 21 went into Council Bluffs late, which is 1.31 per cent. This year we have so far moved 589 blocks to Ogden, containing 25,882 cars, and made schedule time with all of them.

Q. Now, just there, if you make better than your 154-hour schedule, then your Rogue River fruit would to that extent arrive in Chicago in less than 188 hours from Medford?

1894 A. That is true; whatever we make up on that schedule would show that much earlier arrival.

Q. Now, by way of Alturas, what do you think you can do with that fruit?

A. I have made a calculation assuming the fruit would move via Alturas and Fernley, and figure that the time would be shortened about 11 hours. I did that by assuming the speed of (3434) 12 miles an hour from Medford to Fernley, allowed 2 hours at Fernley for connection, and added the time of our standard fruit blocks from Fernley to Chicago, which gives a total of 177 hours.

Q. Now, what do you think can be done by way of the cross-State line, with that same traffic?

A. Using the same method, that is, allowing 12 miles an hour from Medford to Ontario, by way of Crescent and Crane, and there coupling up with the Union Pacific's fruit block schedule, I figure 187 hours.

Those plans that I have mentioned, 188 hours now via Roseville, and 177 via Fernley, and 187 via Crane, are all quite close together. There isn't much variation there, considering the total elapsed time, and the conclusion I reach is that the same time could be made on any three of those routes; that is, the difference is not so great but what whatever was considered time for the Medford fruit would be made by any of those rates—could be made by any of those routes.

I planned on getting to Crescent Lake by Klamath Falls. (3435.)

Mr. DEY. Now, let us assume that the Roseville route, the Alturas route, and the Crane route are all owned separately and operated separately, that is, as competing carriers, what would the result be, in the light of your experience and the practice that railroads adopt generally, especially the western roads, with respect to that type of traffic?

1895 A. All three of those separate carriers would have an identical schedule for fruit from Medford to Chicago; the schedule, elapsed time, would be identical.

This 188-hour schedule out of Medford calls for a departure at 10.00 p. m., and 31 hours to Roseville, which makes 5.00 a. m., and

I have allowed them 3 hours, which would make them out of Roseville 8.00 a. m. We have no fixed departure from Roseville, but we endeavor to take this fruit that leaves at 3.00 a. m., and connect it up or run off the times that its arrival in Chicago will be equivalent to the time had the train departed at 3.00 a. m., which makes the 3.00 p. m. delivery at Chicago. That is 1.00 p. m. at Chicago. The idea of getting into Chicago about that hour of the day is to connect with the trains east from Chicago to the Atlantic seaboard. We are endeavoring, and generally do, to run off the time that trains leave after (3436) 3.00 a. m., to put them on the schedule that they would have made had they left at 3.00 a. m., that applying to fruit that leaves up as late as noon. The reason for this is that the marketing of fruits is in the early morning, and it is generally true, that unless the fruits get to their destination in time for that early market it might just as well wait until the next morning. Then, most of the perishable traffic going beyond Chicago leaves there in the evening, so a car that is going to Chicago and the owner desires to put it on the Chicago market the following morning, or, if he concludes he can do better to send it on east, he wants to make the previous evening's connection east, in order to make the morning market at some other point.

Exam. ROGERS. Well, if your 188 hours is so arranged as to get you to these morning markets, the question in my mind is as to how the 11 hours reduction is going to help very much?

A. Well, the point is that this fruit now moving through (3437) Roseville, gets there about 5.00 a. m. and leaves about 8.00, which makes it about 5 hours late. Now to make the same run via Fernley, if we ran over there 11 hours sooner, we would have run off that 6 hours and bring it to 3.00 a. m. that we are now behind arriving Roseville, and we would have about 5 hours margin there for connection to connect up with a theoretical 3.00 a. m. departure out of Roseville.

1896

Even if the trains depart after 3.00 a. m. we endeavor to put them on a schedule that would be equivalent to a 3.00 a. m. departure. If we start the first train of 20 trains out with the schedule of the present hour, and the 20th train, considerable time elapses, then the first train must exceed the schedule in order to close up, and they will all get there to market, and we all endeavor to do that—I say "we"—the carriers all endeavor to do that. (3438.) It boils down to this, though, whatever the schedule was out of Medford, it could be made within the realm of practicability by any route out of Medford, that is, via Roseville, via Fernley, or via Crane, the schedule could be made on any one of those three routes with about the same facility.

I don't think Portland is a practicable route for Rogue River fruit.

Exam. ROGERS. This forty some miles saving in mileage, that only applies to the Rogue River, as I understand it, the Rogue River section? What I had in mind, Mr. Burckhalter, as I remember it,

the statement has been made here several times that it would be a saving of some 200 miles—via the Alturas route as distinguished from the Roseville route, on this western Oregon traffic.

A. Well, that is the comparative distance from Klamath Falls to Fernley via the two routes. That is what we have discussed in this hearing, as I understand it, many times, that the (3439) Alturas route saves about 212 miles over the Roseville route for traffic moving through Klamath Falls, but when we get over
1897 to Black Butte we get a little different equation there and the saving is 41 miles.

Q. (By Mr. Dey.) Now, with respect to perishable fruit from Douglas County, take the point of Roseburg, Mr. Burckhalter, and have you made a similar study with respect to the movement of perishable fruit out of there through the gateways of Roseville, Portland, and Crescent Lake and Crane, and Crescent Lake-Alturas?

A. Yes; I made some calculations to show what Roseburg perishables might do via the various gateways.

I conclude that the traffic now moving from Roseburg through Portland is making Chicago in about 190 hours. I figure that if that traffic was hauled south to Black Butte, Klamath Falls, Alturas and Fernley, it should make about 192 hours; that if it was hauled back to Eugene, then to Crescent Lake, Klamath Falls, Fernley and east, it would make about 185 hours. I figured similarly if it moved via Eugene, Crescent Lake, and Crane the schedule would be 178 hours. (3440.)

There is only a difference of 7 hours between Crane and Alturas routing in time, and the schedule would be the same over either line as a matter of practical practice, if they were in separate ownership and competing lines. They would still make the same schedule if the gateway were opened so that the originating line could be short-hauled.

The reason that we have only 7 hours difference there, with a difference in mileage of 213 or 214, is due to the fact that the schedule on our central route, that is, Roseville to Chicago, is a little bit faster than it is from Rieth, in Oregon, to Chicago. The Southern Pacific-Union Pacific and Iowa lines fruit blocks are on a slightly faster schedule than the schedules out of this Northwest territory, as figured over the Short Line, Union Pacific and Iowa lines.
1898 I might say that the 154 hours Roseville to Chicago is equaled by the Santa Fe from Bakersfield to Chicago, and by the Union Pacific, Southern (3441) Pacific and Sante Fe from Colton to Chicago. They all maintain the same schedule. I wouldn't expect any carrier to have a faster schedule than any other carrier for perishable freight out of the same territory.

Unless the schedule is shortened in order to get there a day earlier, a few hours shortening wouldn't make any difference. The theoretical schedule and the practical operation must be such so as to catch a market; but the point I am trying to make is that that is

the way the schedule would be fixed as between competing lines out of any territory. A schedule is set up which will meet the market, and all the roads involved meet that schedule, notwithstanding their mileages may be a little different, but only slightly so, and the line that is a little longer can readily take up that time; they will just have to travel a little faster. That is true of passenger traffic, also. (3442.)

The schedules of all the carriers are supposed to be reasonably prompt, and a carrier that couldn't meet the adverse schedule of another carrier that was two days shorter wouldn't expect to get any business.

Comr. McMANAMY. Now, in view of your explanation that these fruit blocks are arriving in Chicago at practically every hour of the 24, do you still think that a few hours, 10 hours, 12 hours, wouldn't make any difference?

A. The fruit blocks are arriving at Chicago consisting of many trains spread. They have to be separated half an hour or an hour, according to conditions. They can't move 20 trains in one into Chicago or any place else—you understand, Mr. Examiner and Mr. Commissioner—but to take care of the market condition the train that departs on the theoretical 3.00 a. m. schedule must
1899 run ahead of that schedule and get in ahead of that schedule and get in ahead of that schedule so that the last train can get in on the schedule. That is what we aim to do. Have I made it plain, please? (3443.)

Comr. McMANAMY. Yes; but in view of the fact that there are 18 or 20 or perhaps 30 fruit blocks in one day, they must be distributed over the 24-hour period—some get in at 1 a. m., 3 a. m., 11, 10, and midnight, all on the same day.

A. Yes; they do that in the rush season. We don't endeavor or don't try to run off delay that is over probably 10 or 12 hours in departing time. If fruit gets into Roseville or any other assembling point more than 8 or 10 hours behind the departing time we don't expect to run off that tonnage, and it won't make the same market as the fruit that was in there and ready to go at 3 a. m., so there is some business going around the clock, but as to the first train that leaves at 3 a. m. and is due in Chicago, say, about 1 p. m., and then if trains left every hour after that up to 8 or 9 or 10 o'clock, that would be 7 trains—we would get that seventh train in there at 1 p. m., according to schedule, and if we could go in there, why, the train that left at 3 a. m. would have to get in considerably ahead of 1 p. m., so the whole procession would be in there and the last one would get in on the theoretical time.

Comr. McMANAMY. Providing the traffic conditions on the Chicago & North Western permit.

A. Yes; well, we have three lines, of course, out of Omaha (3444), three connections, the I. C.——

As soon as the cars arrive in Chicago, the Chicago lines break up the trains and distribute the cars, take them to the team tracks or

the hold tracks, inspection tracks, as may be directed by the shipper. The Chicago sales won't begin until the following morning, gener-
ally. I don't think; but if the shipper has a car he has sent to
1900 Chicago with the thought that he will dispose of it at Chicago
if the price suits him, otherwise if he thinks he will do better he will send it on to New York, he wants it in there in order to catch the New York connection that evening out of Chicago, and if he doesn't send it on east, why, he is there for the following morning market.

A great many of the last cars reach Chicago in time for the New York connection. Ordinarily trains that leave 8 or 10 hours late on the clock time out of the west assembling point, such as Roseville or Colton, will get through as *as* to make the New York connection. (3445.)

The Southern Pacific could very conveniently meet any schedule or any time that is made on any class of traffic through Crane by the Alturas route.

With respect to the public convenience and necessity being better accomplished by way of Crane and Ontario as against the Alturas route, from the standpoint of theoretical schedule, the fruit could move either way. I think that in practice the service might be a little better via Alturas, because there is a bigger tide of fruit moving there, more trains, more chance of prompt connection; there is more double-track on that route, and the schedules are a little bit faster. There is about 108 miles more double-track on the Alturas route as against the Crane route from Crescent Lake to Granger.

We have two icing tracks at Klamath Falls with an icing platform between, which holds about 28 cars at the platform. The tracks (3446) themselves hold about 70 cars. And it is the intention to extend the platform as may be necessary, and the platform can be ultimately made 70 car lengths with the existing track arrangement, should that become necessary. By extending the platform we can ice 140 cars. I think they would extend to Winnemucca, Mr. Commissioner, but I haven't gone into it enough to say positively.

After leaving Roseville, we first ice at Sparks, then at Carlin, then
at Ogden. (3447.)

1901 The distance from Roseville to Sparks is about one-half the
distance from Klamath Falls to Winnemucca. But we have this condition: That the fruit leaving California in the busy season is quite warm, and we find that the first icing that fruit gets is always pretty heavy icing when it is located in a hot country. The first icing the fruit receives is at Roseville, which is a heavy icing generally. We do not precool at Roseville. All we do is to put ice in an empty car that is going out to be loaded with fruit. The ice is put in the car at Roseville when they load them if it is going to be reasonably close to Roseville. Then it is going to come back to Roseville and is reiced there.

Fruit that is loaded in the Sacramento Valley is usually loaded in cars that have been precooled. All the cars where the shipment

is under ice, the car is all iced before the fruit is loaded. The shippers precool some of the fruit, but very little of it is precooled by them. (3448–3449.)

The icing at Sparks is not so heavy. At Medford the cars are iced before the fruit is loaded, and then they are reiced after they are loaded, so the cars leave Medford with full tanks of ice, then going to Klamath Falls they would get their tanks filled up again, and I think they would make Carlin without icing. (3449.)

Klamath Falls is not a large terminal; we have about 6 or 7 train tracks. This terminal was completed at the time the Natron line was opened to freight service, about two years ago, as to the additions that were put there. However, it has been a terminal ever since the railroad extended to Klamath Falls as a branch line, and was always the terminal for that part of the railroad, but when we put through traffic on there in connection with completing the Natron line it became necessary to somewhat enlarge it, extend the tracks and build an engine house, and that sort of thing, and I think
1902 we spent over a million dollars there, and we have plenty of room to build a good many more train tracks, if necessary. This terminal is ample to handle with expedition and in a perfectly modern up-to-date way, the traffic that will flow in there from western Oregon, from the south and (3450) from the east through Alturas to Klamath Falls. We have expansion for a few more tracks that I might like to build some time in the next few years. We have got the yard outlined, and we have got the spaces laying right there to drop the tracks in between the present body tracks and the outside running tracks. It is 99 miles from Crescent Lake.

Q. Now again, with respect to your perishables, will you please state in the record the movement of perishables that you have from California through Roseville and on through Fernley in January, February, and March, which is the season that the broccoli moves There has been a lot of testimony in this record about broccoli that you have not heard because you have not been here, but I want to find out how that broccoli movement would move over the Alturas route and fit in with your fruit blocks, whether you are otherwise overcrowded on the Central Pacific line at that time of year.

A. In January this year we moved 1,297 perishable cars east from Roseville, averaging 42 per day; in February, 1,294, averaging 43 per day; March, 1,713, averaging 55 per day; in April, 3,474, averaging 78 per day; and from then on there has been considerable increase. (3451.) September was our busiest season last year because of the movement of grapes from California, and we averaged 623 cars that month. In October we averaged 607 cars per day. In January, February, and March the average was 30 or 40 cars a day. Yes; we have plenty of room to pick up 20, 30, or 40 cars of Broccoli a day at Fernley, Nevada, in those months.

Q. Now what, in your opinion, would be the relative operating advantages or disadvantages as between the proposed cross-
1903 State and the Alturas line on ordinary freight, such as lumber, moving over the Cascade line from Eugene into Crescent

Let us assume that it is interchanged there with the Union Pacific system lines, on the one hand, and on the other hand, that it is taken from Crescent down into Klamath Falls and moved over the Alturas line, what would be the relative time that would be made there, in your opinion, and why?

A. Well, the business we set out at Crescent Lake to go over (3452) the cross-State line would not probably make as quick a connection as if we took it down to Klamath Falls and moved it out of Klamath Falls via Alturas. We have a very fast railroad from Crescent Lake to Klamath Falls, a distance of 99 miles, and practically all down hill. That is a very fast freight run southbound. Very often it is made in five and six hours. So I think ordinarily the business moving through Crescent Lake that we took through to Klamath Falls would be in Klamath Falls before it could have left Crescent Lake, had it been set out there. And I think probably that on an average it would get out of Klamath Falls about as quick as it would get out of Crescent Lake, probably even sooner.

That is, on the assumption, Mr. Commissioner, that the greater density of traffic will afford a better interchange connection. I assume that there will be much more business going out of Klamath Falls to Alturas and beyond than would go out of Crescent Lake to go over the cross-State line. And if they only ran one train a day over the cross-State line, business would have to connect with that train or suffer delay. Out of Klamath Falls I am sure we will run more than one train a (3453) day via Alturas, and for that reason I think we can make better connection ordinarily at Alturas. It is relatively a very fast freight run from Crescent Lake to Klamath Falls.

Q. (By Mr. DEY.) Now what does a freight train ordinarily make in time on such a run as your Alturas line will be, or, let us assume across the cross-State line, assuming that the cross-State line is going to be built of as good construction as the Alturas line, what time would your freight trains make over these lines as compared with that stretch of track between Crescent Lake and Klamath Falls?

1904

A. Well, the trains are not likely to make nearly as good time on the cross-State line or on the Alturas line as they will between Crescent Lake and Klamath Falls, because the line Crescent Lake to Klamath Falls will undoubtedly always be a higher standard railroad than those two secondary main lines that we are discussing, and also because in the direction we are considering it is all down hill from Crescent Lake to Klamath Falls, whereas the other lines present considerable grades and curvatures.

There is also very little curvature between Crescent Lake and Klamath Falls. So the time would be relatively faster. (3454.)

And with through train service over the Alturas line or the cross-State line it would certainly be the aim of the operating officers to get the trains over without the penalty of overtime, which would require an average speed between terminals of 12½ miles an hour or better. Of course, a little delay at Terminal would slow them down,

so probably dead freight there might make about 10 miles an hour across those lines. Perishables would probably do a little better. Business moving in local freight trains that would have to do a lot of switching en route would not make such good time.

Assuming that the cross-State line is as good a line and has just as good service over it, and its freight trains make this 10 miles per hour, if it is 215 miles shorter than the Alturas line it would mean 21 hours difference in time. This 21 hours would be cut down to
1905 such extent as the cross-State line did not permit of as effective operation as the Alturas line. And the interchange delay would become a factor there at both Crescent Lake, Klamath Falls, Fernley, and Ontario. (3455.)

In the winter there is generally a good deal more snow at Crescent Lake than at Klamath Falls. Nine miles north of Crescent Lake terminal the snowfall on the ground, the accumulation of snow on the ground March 18, 1927, was 128 inches—at Cascade summit. (3456.) At Crescent Lake there was about 56 inches on the level, in our yards and around our stations and engine houses.

We have 1,645 feet of concrete and mud shed. It is to protect the track from mud and snow slides. And we have 145 feet now under construction, and we propose to build probably next year about 520 feet more. Our mileage over the Sierras must be around 20 miles. But we are taking the sheds down in the Sierras at quite a rate. We are getting down 3 miles this year, and it must be remembered that the Sierra summit is slightly over 7,000 feet, whereas the Cascade summit is only 4,800 feet. (3457.)

In February of this year we only had about 12 inches of snow on the ground at Crescent Lake and about 40 inches at Cascade summit. The greatest snow we had this past winter at Cascade summit was only about 68 inches. This larger fall that I mentioned was an exceptionally heavy winter. On the summit of the Sierras we generally have about 10 feet of snow. In severe winters we have had 20 and 30 feet.

I am not familiar, Mr. Commissioner, with these Northern lines, but I would say this: That we have a little more snow at Crescent Lake, I would think, than we do at Sparks or any terminal on (3458) the Ogden route, or at Klamath Falls. And on an average a little more than at Truckee. The snow lays longer at Crescent Lake, as far as our experience goes. But I would not say that weather conditions at Crescent Lake are at all serious and are going to prevent us from running a railroad there and interchanging business, or anything of that kind.

1906 We used our rotors on the Natron cut-off last winter very little. The winter before that we had this 12 feet of snow we used the rotors a great deal in the storms. We have two plows that are practically new, and one of an older and smaller type.

I would not urge that the weather was any bar to interchange at Crescent Lake. (3459.)

Mr. DEY. All my questions are designed to bring out as to the operation between Crescent Lake and Klamath Falls is the amount of snow, and so forth; and the testimony in your Cab Curtain case, I think, bears me out.

The Siskiyou Mountains are not in a class with the Cascades as far as severe weather conditions are concerned. Ordinarily we have much less snow on the summit of these mountains than we do on the Cascades and the Sierras. I have never seen over 6 feet of snow on the Siskiyous, and that was 17 years ago. Usually 2 or 3 feet of snow is the most found there. (3460.)

The Alturas line was planned and constructed to afford more economical operation by affording a shorter route to traffic that could move via Alturas, and to develop local business. By traffic I have in mind all the southern and western Oregon traffic, and the Klamath Basin traffic that will move east through Ogden, or from Ogden west into those territories. The Alturas route, could not be justified, in my opinion, in the absence of this through traffic.

Nearly 50 per cent of the earnings of the new construction were to be attributed to the savings attained by hauling business over the Alturas line rather than Roseville. (3461.) And this was giving full consideration to the optimistic views of traffic men who made surveys of what the traffic would be in the future.

Q. Now, then, what has happened since that time, since the set-up that we went into court on before the commission in the
1907 Klamath cases, what has happened with respect to that situation down there, if anything, that would increase or decrease the importance of this western Oregon business to support the Alturas line?

A. The Great Northern has come into Klamath Falls since that time and are also half owners of the branch line extending easterly from Klamath Falls, called The Oregon, California & Eastern, or Strahorn line. So that the amount of business that we had in our set-up in presenting our Alturas line case cannot now be realized, and it makes the savings due to rerouting traffic relatively much more important than they were in the former case.

Q. In other words, the Klamath Basin business that we then relied on as having exclusively for the Alturas line, from now on there, is now being and will hereafter be divided up with the Great Northern?

A. Yes. (3462.)

Exam. ROGERS. It seems to me that in speaking of the western Oregon traffic it might be well to separate the consideration between north and south traffic and western Oregon traffic going east.

Mr. DEY. In all of the questions I have meant, Mr. Burckhalter, and I assume in all of your answers with respect to western Oregon traffic we have been talking about, traffic which would move through Ogden east and west?

The WITNESS. Yes.

Exam. ROGERS. Well, was that true when you said 50 per cent of the justification for the Alturas route?

A. Yes.

No; I had not considered in that answer the western Oregon traffic going to California. That won't go over the Alturas cut-off. It will move, as to-day, through Black Butte, Dunsmuir, and south.

The Alturas line does not afford a shorter route than the
1908 present one for business Klamath Falls to California.

Q. (By Mr. DEY.) Now also in what we have been discussing, Mr. Burckhalter, the Natron cut-off was not considered, because that was completed and, in fact, we were ready for (3463) operation when the Klamath Basin cases were tried?

A. Yes.

Q. When we were talking about the Alturas route in these last questions and answers, we were referring to a line from Klamath Falls, Oregon, through Alturas, Wendel to Fernley, Nevada?

A. That is correct.

In the third year, between the Alturas and the Roseville route, we showed a saving of $432,000, resulting from hauling traffic via Alturas instead of Roseville. This would be approximately 6 per cent on $7,000,000.

I drew a comparison on what Mr. Newell's savings were in loads between the Roseville and Alturus routes, and found he saved $828,000 on 29,592 loaded cars, which is about $28 a car. Our estimate on 23,130 loads is $17.05 a car.

Q. Now is that the best showing that you could make when you were making a study of savings for presentation to the commission (3464) when we were asking for authority to build the line?

A. Yes, sir; that is the best we could make. Our figure is not quite comparable with Mr. Newell's figure, though, in that our study included some northern California business, on which the saving is somewhat less than on the northwestern Oregon business; so I would expect Mr. Newell's figure to be a little higher than ours under his different premises, but the figures I gave you show that he is 65 per cent higher than we were on the savings per loaded car, and it is my opinion that his savings are very considerably higher than they should be.

1909 I can't think of any advantages that could come to the Southern Pacific Company in joining in the construction of this cross-State line. The disadvantage will be measured by the amount of traffic that can be taken away from us at Crescent Lake, that we would otherwise handle ourselves for the long haul to Ogden. (3465.) The Southern Pacific does not propose to let one car of that traffic get away from it if it can be helped.

The Southern Pacific undertakes to serve what we commonly call western Oregon, lying west of the Cascade Mountains, from the Columbia River to the southern border of the State of Oregon, and also in the Klamath Basin and the territory up as far as Cascade

summit, east of the Cascade Mountains, and in such country as may be tributary to that line; that is, the timber that may be tributary to the line between Cascade summit and Klamath Falls, even though it be out of the Klamath Basin, so-called.

Q. In other words, the timber belt that extends for 30 or 40 or 50 miles over toward and beyond the Great Northern line which parallels the Cascade line, there is a timber belt; that is or is not tributary to the Natron line, and how was it considered when the Natron line was built?

A. We considered any timber lying to the east of the Natron line, within a reasonable distance, say 30 or 40 or 50 miles, as (3466) tributary to that line.

Q. (By Mr. DEY.) Do you consider the central Oregon territory (3467) in discussion in this case, as territory that logically falls in the area that the Southern Pacific lines do or should be required to serve?

A. No. I think the land or location that would be traversed by the proposed cross-State line is not in the territory that we would naturally, or could be expected to, serve. By that I mean with the existing or future rails.

1910 Exam. ROGERS. Well, how do you arrive at what the Southern Pacific has proposed to do in the way of serving the public under the act?

A. I think we should be expected to build lines that are justified by the traffic offered.

Exam. ROGERS. Well, do you have in mind that some particular territory in the United States has been allotted to the Southern Pacific?

A. No; but the territory that we can conveniently reach, and where we can conveniently reach them and there is traffic to justify the construction, I think we should build the line. Now the idea I have about the High Desert is that there is not enough traffic to justify our building over there. (3468.) And we are not as near that territory as the Great Northern or the Union Pacific.

Comr. MCMANAMY. Then does that mean that if that section of the country is to have railroad transportation, that one of the lines that is nearest to it should be required to provide that transportation, but that it should not be required or authorized to extend its lines into some of the traffic which surrounds that section?

A. I don't know that I fully understand your question, but if I do understand it my answer is this: That I don't think it is necessary, under the present development of the art of regulation, for one railroad to duplicate another, and I don't think it should be done unless there is enough traffic, and a growing traffic that will justify the incoming of the second railroad. I don't think any railroad should, in the present state of the art, be built, like as was testified to here the other day, the Oregon Electric built down here and did

not create any business, took all of its business from the Southern Pacific. I think railroad investment should be along the lines
1911 of development nowadays, and not on the idea of dividing up traffic, where there is not enough to divide profitably between two carriers. (3469.)

There is not any question of dividing traffic over in this central Oregon territory that is involved in this case.

At the time the Natron cut-off was built, the Siskiyou route was not handling its maximum capacity. It could have been fixed up to handle much heavier business than it is capable of carrying today. That is a (3470) question of putting in more sidings and appurtenant facilities.

The situation is this: That through litigation our completion of the Natron cut-off was delayed some 13 years. The project lay dormant about 10 years. In that interval we had yet to close the gap between Kirk and Oakridge, and during this time traffic moving over the Siskiyou line very greatly increased; so much so that it was necessary during the period the Cascade line lay dormant to very extensively add to the facilities on the Siskiyou line to give it an increased carrying capacity. We spent probably a million and a half to two million dollars on that line during this interval to give it increased capacity. From the standpoint of prudent investment it was necessary to spend this sum because we were building, or expected to build, the Cascade line and we did not want to run our investment in the Siskiyou line up any higher than was necessary. (3471.) No improvements have been made on the Siskiyou route since the Natron cut-off was built or closed up, in the way of increasing its capacity.

We could not handle over the Siskiyou route all the traffic that we are now handling over the Siskiyou route and Cascade line and give nearly as good service. The fundamental reason for closing up this gap in the Natron cut-off and placing in operation the Cascade line, going way back in early history, was to get better line, lower grades and curvature, with consequent economy in operation. (3472.)

1912 I have examined Exhibit 16, being a purported study of costs and savings as among the Roseville route, the Alturas route, and the proposed cross-State route, by Mr. J. P. Newell. I have been studying this exhibit only two days, but I find a few inaccuracies. Referring to Table XII, page 109, I notice that the figure "77,234" in the column "Saving, Total, Via Proposed Route Via Alturas" is in error. That $72,000 should be $7,234.00. There is an error there of $69,000 in savings per this tabulation. (3473.) The decimal point is wrong, and it has been carried into the addition.

On page 109 of this table I notice that the total cost of loaded cars, as determined by Mr. Newell for a saving on the Roseville route as compared with Crane, compared with his saving of the Alturas route compared with Crane, totals up on Southern Pacific business $1,291,993.00 in the column headed "Total, Existing Route Via Rose-

ville." In footing all the items of cost in the third column from the right on pages 108 and 109, and footing the extreme right column, and correcting for this error of $69,000.00 I have just referred to, I get a footing of $463,150.00. The difference of those two figures is Mr. Newell's estimate of the saving that would result from the construction of the Alturas line as compared with moving the business over the Roseville line for the number of loads he is here dealing with. That number of loads is 29,592 and therefore, the saving, according to his figures, would be $28.01 a car. Our studies show the savings with slightly different premises, namely, including some northern California (3474) business, only turned out to be $17 a car. The twenty-eight is 65 per cent higher than seventeen, and I draw the conclusions that Mr. Newell's estimates are too high.

I would like to proceed in my own way, if I may, now, and further discuss the disagreement I have with this treatment made by Mr. Newell.

1913 I didn't understand the purpose of this Table XII. The savings are set up on the basis of hauling all the empties, and the figures do not again seem to be used. I am unable to find where Mr. Newell drew any conclusion about the totals that this exhibit would reflect.

I wish to direct my discussion hereafter on the basis of the Alturas line being constructed. Mr. Newell has carried through an alternate study—one is the savings over the Roseville route, and the other are the savings over the Alturas route.

Now, we are building the Alturas line, so I haven't taken any time to go into the Roseville saving figures, but I have directed my study to the Alturas line savings. (3475.)

I can't see the slightest possibility of the cross-State line being completed before the Alturas line can be constructed. I am going on the statement that the Alturas line is an accomplished fact in less than a year.

I have also neglected to make any study of those factors in the report that deal with the traffic in and out of Bend, which is Union Pacific, and I have paid no attention to it.

I have also made no effort to ascertain what our traffic people may conclude as to Mr. Newell's traffic figures, that is, business originating, and so on, but I accepted his figures in that regard, subject, however, to any proper correction, if there be one, being made to his traffic figures in the event our traffic or other traffic witnesses showed them to be in error.

I accept as moving all that he claims will move, and the way he says it moves, as to the loads. (3476.)

(A statement was here received in evidence, marked "Defendants' Exhibit No. 103, Witness Burckhalter.")

1914 This exhibit shows some figures as to the interchange of cars as between the Southern Pacific on the one hand and its connections at Ogden, Utah, on the other hand, during the year 1926. I have excluded from this statement the interchange

of refrigerator cars, which went up to around 70,000 cars and I thought would distort the picture to include here, because the number of cars moving in and out of Oregon is a relatively small percentage of the total, (3477) and also Mr. Newell does not move refrigerator cars out of southern Oregon in his final study of the cross-State line case.

For the same reason, I excluded tank and stock cars. The stock cars are usually interchanged locally. There is very little interline movement of stock cars, and when such does occur out in the western country it is usually immediately balanced up by the return of equipment. The tank cars moving between Ogden and Oregon points are few. Tank cars are usually and mostly employed in the transportation of oils, which, as far as our lines are concerned, are moving in loads from California to Oregon. So I have reduced this statement to box, oil, coal, and flat cars, and it will be noted that the combined interchange will run about 119,000 cars that I am dealing with.

Now, starting at the bottom, with flat cars, the bottom of the first bracket, the least numerous class, it will be noticed that there are very few flat cars involved in the interchange, and that the empties received west were 433 and the empties delivered east were 525. I draw the conclusion from that that there were no empty (3478) flat cars hauled from Ogden to Oregon.

Taking the coal cars next, it will be observed that the coal cars come to us in the received column to the number of 7,892, whereas we were only able to load back 1,668, that we received 417 empty coal cars and that we delivered to Ogden 6,099 empty coal cars, from which it is also apparent that there were no empty coal cars hauled from Ogden to Oregon. Any coal cars that were wanted in Oregon were manifestly hauled from California from
1915 among this 7,892, after they had been unloaded.

There is a considerable movement of coal from Utah points into California coming out the Union Pacific and the Rio Grande railroads.

I have taken box and auto cars and set them down in the lower bracket and there combined them for purposes of further study, because I regard box and auto cars, as commonly termed, house cars and interchangeable, and I think to simplify the discussion we can combine them without any error.

As to box and auto cars, which are in the lower bracket of the exhibit, it will be noticed that we delivered an excess of those cars in the year 1926 to our connections at Ogden of 14,465 cars, so that it is very evident that there weren't many empties hauled west out of Ogden. I show the number of empties that were hauled west out of Ogden. There (3479) were 6,141, and there were hauled east into Ogden 3,063. That makes a net of about 3,000 cars that were hauled west out of Ogden. I conclude that all of those cars hauled west out of Ogden, box and auto, were undoubtedly used locally in Nevada.

I find that in 1926 we loaded 5,668 cars of lumber on our so-called Fernley branch that went out through Ogden. The Fernley branch

is the line from Fernley to Westwood. However, if a few of those cars did trickle into Oregon they would very manifestly be readily consumed in loading in southern Oregon or in the Klamath Basin.

It will be noted, according to Mr. Newell's exhibit, page 110, that he shows the Klamath Basin needs 4,480 empty cars for forest products, and that Jackson and Josephine Counties require 6,300. In this study he hasn't figured on taking out over the Crane line any of the business from Klamath County and Jackson County in his final set-
up where he goes into the question of net earnings.

1916 No; Jackson nor Josephine nor Klamath Counties were not included. These counties, in 1926, required about 6,800 empty cars for forest products. I draw the conclusion from that, Mr. Commissioner and Mr. Examiner (3840) that there were no empty cars of the type box, auto flat or coal hauled from Ogden in the year 1926 to Eugene or points north, that is, we didn't haul a single car from Ogden of those classes to Eugene and points north.

It is manifest that empties are needed in Oregon in large volume to take care of the forest products and other products moving out of Oregon via Ogden.

Mr. Newell shows in his Table XII that there were 25,992 loads moving east through Ogden and only 1,226 loads moving west; therefore, there was a decision in the westward movement of 24,766 cars for the Oregon business itself. Now, those cars have to be provided from elsewhere. It is manifest we didn't get them at Ogden, because we delievered more cars at Ogden than we received at Ogden. We didn't get the cars at Portland, because our interchange at Portland for the year 1926 shows that we lost 1,021 house cars at Portland gateway.

Lumber usually moves in box or auto cars from this territory. (3481.) We lost that many cars in the interchange in 1926; they came from California.

Comr. McMANAMY. To what extent will they be made empty in southern Oregon, in the Klamath Falls zone? Do you have many loads going in there?

A. Well, I used Mr. Newell's figure on that. He shows that the loads coming through Ogden in 1926 totaled 1,226 cars, and after discarding the business that he figures would move through Ogden after the cross-State line was built he concludes that 788 of those cars would come in over the cross-State line. That is shown in his Table XXI, page 141.

We moved a very large number of empties into Oregon in 1926.

We moved of box and auto cars about 35,000 empty into Oregon
1917 through Ashland and Crescent Lake gateways.

Now, turning back to Mr. Newell's exhibit, he shows on Table XII that he moved 24,766 empties west, on which he claims a saving of $327,120.00, moving them over the Crane route as against the Alturas route. Now, he cannot claim that saving, because the cars didn't move over the Alturas route, and they didn't move over the Roseville route. (3482.)

On page 141, Table XXI, that is the first year of operation of the cross-State line compared with the alternative of the Alturas line, Mr. Newell moves east via the cross-State line cars based on the 1926 estimate that are now moving through Ogden to the extent of 17,284—that is loads—he moved 788 loads over the cross-State line into Oregon through Crescent Lake, which will leave him a deficiency of cars at Crescent Lake of the difference between those figures, of 16,496. Mr. Newell will not balance his interchange at Crescent Lake under the set-up of this Table XXI by 16,496 empties. He has made no provision that I can find to get those empties to Ogden to handle this business, and it is obvious that the picture is useless unless the business that the cross-State line is supposed to take out of Crescent Lake will be furnished cars with which that business can move. It cannot move without the cars.

Now, Mr. Newell in his study makes the very particular (3483) assumption that for every load he takes east out of Oregon he hauls back 6/10ths of a car as an empty. Now, his Table XXI is set up on the theory that he hauled 60 per cent of the number of loaded cars, which is 17,284 west as empties—that would be 10,370 cars—for which he has included a saving cost on hauling the empties into Crescent Lake. He didn't haul them into Crescent Lake, and they are not now moving to Crescent Lake through Ogden.

The cars could be moved to Crescent Lake in the future, following the construction of the cross-State line; if the Union Pacific 1918 and other interested carriers in that group would send their cars over there, they could certainly be moved, in which event Mr. Newell's set-up here would have to be charged with the cost of moving those empties into Crescent Lake.

The empties which originate primarily in southern California we would turn back to our connections, and we would save hauling some of these even as far as El Paso. (3484.)

In Mr. Newell's first-year table he has erroneously included a saving credited to the cross-State line of hauling 10,370 empties at $17.43 per car, which, roughly, equals $180,000.00. He can't claim that credit, because the cars didn't move. Now, if he is going to bring those 10,370 empties into Crescent Lake across the cross-State line, they will, as far as my judgment will determine, have to come all the way from Omaha. I believe that the Union Pacific and all these northern lines are now hauling empty box cars west all the time, because of the large tonnage of lumber moving out of this country, and that any additional empties hauled by the Union Pacific into the Pacific Northwest will simply mean that many more cars hauled from Omaha.

Now, Mr. Newell shows on page 75 that it costs $130.05 to haul an empty from Omaha to Crescent Lake. If he hauls 10,370 empties from Omaha, multiplying that number by $130.00 a car, it will cost $1,348,000.00. That added to $180,000.00 erroneously claimed results in a charge to this account of over a million and a half dollars that has not been put in there, and will entirely wipe out that net saving

and throw the thing far into the red—on the empty car item alone. (3485.) I am stating to you that I think Mr. Newell's figures are too high, but for the purpose of this analysis I have used them, but I have shown where he didn't take in the elements of this problem that pertain to the handling of furnishing empty cars to handle this business over the cross-State line.

In a similar way, I have corrected Table XIX, page 136,
1919 that being the fifth-year business. In this table the total cars moving east over the cross-State line is 2,506; and west he moves 1,182 loads. The difference between these figures is 23,883 cars, which is the deficiency in the interchange at Crescent Lake.

Mr. Newell erroneously credits himself with an alleged saving of hauling empty cars west in number 60 per cent of the loaded cars east, that is, 15,039 cars, multiplied by his saving per car of $17.43, results in $262,000.00, but he has to get 15,039 cars and more west to Crescent Lake, and, as I explained in the other instance, so far as I can see they will have to be hauled from Omaha, and possibly beyond, and 15,039 cars (3486) at $130.05, of hauling an empty from Omaha to Crescent Lake, results in a charge of $1,956,000.00, which added to the $262,000.00 makes a charge of, in round numbers, $2,200,000.00 against the cross-State line that Mr. Newell hasn't taken into account in his study. That amount wipes out any alleged savings that he has proposed, and throws the project away into the red ink. (3487.)

Mr. Newell sets up very definitely the number of loads he is going to haul east and the number he is going to haul west. He doesn't say where he is going to get these cars, but he takes into his calculation an estimated saving on hauling empties through Alturas as against Crane to the number that 60 per cent of the loads east represent empties west; that is, that 60 per cent of the cars going east over the Alturas route are going to come back over the Alturas route empty, as against 60 per cent of the cars going east over the Crane route are going to come back over the Crane route; but I have shown that those cars are not coming through Ogden, therefore, he can't claim that saving. (3488.) In order to carry out his calculations he will have to find out where he gets the empties and have to take into his cost study the cost of getting them there and compare it with the present cost of getting them there, which he hasn't done.

1920 Generally speaking, California originates its traffic in perishable cars. The central valleys in the northern part of the State and in the southern part of the State produce a great tonnage of perishable traffic. I believe it is something like 140,000 cars a year. On the other hand, California doesn't originate a great deal of traffic in house cars. On the contrary it consumes more traffic coming to it in house cars than it ships out in house cars. (3489.) Thus house cars accumulate, particularly in southern California. Because of this tremendous refrigerator shipment out of the State all of the lines are obliged to haul empty refrigerators to California by the thousands, and their load factor is extremely low—less than 15 per

cent, I think—so we have the "refers" moving east loaded and west empty, and we have the box cars preponderating west loaded and would tend to go east empty in part, although they are, of course, partly loaded.

Now, we are able through the box cars and auto cars that we make empty in southern California and that we can get from our El Paso connections, to gather up those cars and bring them up into Oregon to maintain a car supply for what we take out through Ogden. My conclusion is that nearly all of these cars came from southern California, and had they not come back to Oregon they would have been returned to connections in southern California (3490) or at El Paso, and some empties that were hauled through to El Paso would not have been hauled from El Paso.

Unless we can keep our gateway interchanges pretty well balanced, we drain equipment away through a gateway, and that leads to serious complications. In the long run we have got to keep our gateway interchanges pretty closely balanced. That is not only year by year, but day by day, when business is good, and week by week, and I can't imagine a condition, a set-up like Mr. Newell has set up
1921 here, of bringing in just a handful of loads west and expect to take many thousands east without providing the cars with which to do it. It is very obvious that the Southern Pacific is not going to charitably haul these cars up from southern California and load for the Union Pacific to haul them east through the cross-State line.

Yes, Mr. Newell contemplated hauling 6/10ths of a car empty west for every loaded car he hauls east over the Crane line, and he took into his account a saving of $17.43 for each of those cars; but those cars didn't move. He credited the cross-State line project with that saving; (3491) a saving which never could occur, because the cars didn't move. The only way it could occur would be to actually haul those cars out from Omaha over the cross-State line—Omaha or elsewhere; then he would have to take into his calculation the cost of hauling those cars out for which he has got nothing now, and that cost runs into tremendous figures, because, according to Mr. Newell, it is $130.00 for each car from Omaha. Mr. Newell's saving is computed on the basis that the cars now move empty west either by Roseville or Alturas to western Oregon? And they don't move there. I didn't complete the figures of what his final Table XXII would be, but if I made the deductions that I have mentioned, his total error on this empty car movement would be in the minus quantity very heavily. (3492.)

You can't save any time on empties on the cross-State line unless you haul them across the cross-State line. Your saving there will not be a cumulative saving. When your mass of empties is shortened up by whatever that amount may be, if any, of a 200-mile shorter haul, that is the end of it.

Our cars that are loaded in western Oregon and go out through Ogden would be returned to us under load or empty at Ogden (3493)

or at some other junction of our line. We might get the car back in Texas, at El Paso. When the car is made empty in the east
1922 it can move various ways, as long as it moves in the direction of our line. There is a provision that interchange must balance car for car in switching interchange in a city and in a short movement, but not as to long-distance traffic. For instance, if we were moving gravel from Salem, Oregon, to some point here on the Oregon-Washington Railroad & Navigation Company, we would keep those cars in rotation and we wouldn't be privileged to return them to some other junction. We would have to return the cars, and they would have to return our cars to Portland.

There are two A. R. A. rules for interchange, one for short-haul cars and another for long-haul cars; there is an exception. The broad rule reads to any junction, and the exception is that cars moving locally will have to be returned to the local junction, as I remember it.

Comr. McMANAMY. What is the rule with respect to return of cars? (3494.)

A. The rule is "Foreign cars at home on a direct connection must be forwarded to the home road loaded or empty, except as provided in paragraphs E and F. If empty at junction with the home road and loading at that point via the home road if not available, they must, subject to rule 5, be delivered to it at that junction, unless an exception to the requirement be agreed to by roads involved. Otherwise cars under this rule may be (a) loaded via any route so that the home road will participate in the freight rate, moved locally in the direction of the home road, or moved locally in an opposite direction from the home road or delivered to a short line or a switching road if to be loaded for delivery on or movement via the home road, or delivered empty to the home road at any junction point, subject to rule 5, or delivered empty to the home road from which originally received under load at the junction where received, if such road is also a direct connection of the home road, or returned empty
1923 to the delivery road when handled in switching service and the owner is not a direct connection in that switching territory."

Now, this rule 5, which is made the exception:

"If the movement of traffic requires return of empty cars to home road via the junction to which cars were delivered in interchange, but under load, the home road may demand return of empty cars at such junction, except that cars offered a home road for repairs in accordance with provision 5, Mechanical (3495), M. C. B. Rules, must be accepted by owners at any junction point."

Comr. McMANAMY. Broadly speaking, isn't the purpose of that rule that cars delivered to foreign line under load must be returned to the home road either under load or empty, and if empty via the same route over which the load was carried?

A. That is the general idea, yes, sir; but it is permissible to bring it home through other junctions empty.

Exam. ROGERS. That is, that must be done if the carrier originating the traffic insists on it?

A. Yes; and in a general way the railroads are insisting that their interchanges be fairly well balanced. My understanding is that the commission is insisting on that, too.

Yes; the rule is definite with respect to the return of cars empty regardless of whether the home road insists on it or whether it doesn't.

Comr. MCMANAMY. In other words, if you deliver certain cars to the Chicago and North Western Railroad or the Union Pacific Railroad the rule governs the return of those cars. You don't have to go to the Union Pacific Railroad and say, "We want those cars returned through the interchange point at which they were delivered." Naturally, in the conduct of business those cars would be returned that way?

A. They generally come back through the same gateway,
1924 but the rule says "deliver empty to home road at any junction point (3496) subject to rule 5." That is paragraph (d) of rule 2. Sometimes, you know, a railroad is perfectly willing to take empty cars at a junction not through which the car went out under load. Sometimes it is a mutual advantage, depending on the accounts of traffic that are paid at the season of the year, and cars wouldn't be needlessly cross-hauled to return them to the same junction to which they were received if it would satisfy the convenience of both parties to effect an interchange.

Comr. MCMANAMY. When a car is loaded out of the line of return movement and is returned via any other route than the one over which the car has moved loaded, there is a charge for the excess haul, isn't there?

A. No; I don't understand that there is. A car can be loaded back to the owner so that he will participate in the business.

Comr. MCMANAMY. I am not speaking of a car loaded back to the owner.

Exam. ROGERS. You can short-route the cars home by the payment of a mileage rate, can't you, and deliver it at any junction?

A. Oh, yes; you can short-route the cars if you pay for it. We haven't done any of it that I know of, but I think it is done, and I don't see any reason why it couldn't be done. I don't see where it is involved here, though, in this case.

Comr. MCMANAMY. There isn't much in this case that isn't (3497) involved.

Mr. DEY. Now, is or is not the Southern Pacific Company in a better position, from the standpoint of economy, to furnish the supply of empty cars for the western Oregon lumber traffic than any other carrier operating in this territory?

A. I believe we are. As long as conditions are as at present,
1925 or as they have been in the last several years, I believe that we can get empties into Oregon more cheaply than anybody

else, for the reasons I have explained, that they accumulate in California.

Exam. ROGERS. Well, this matter of car shortage, I rather presumed from the statements of the witnesses that these cars were rather in shuttle traffic between western Oregon and the east—when made empty east they come back to western Oregon. Is that true or not?

A. You mean that an individual car holds to that route for a round trip?

Exam. ROGERS. Yes. I know you might have some individual cars, but whether the general run of cars that go east from western Oregon come back to western Oregon when they are unloaded in the east?

A. Under the car service rules, if we have a Rock Island car, (3498) for example, at Los Angeles—and we get a good many of them there, because the Rock Island is our Tucumcari connection—we can bring that car to Oregon and load it out through Ogden if the Rock Island gets some haul on it, say from Council Bluffs to Chicago. May I just say in that connection that we haul a great many foreign cars up into Oregon to get loading for them and send them on east again, in lieu of turning them east from southern California empty.

I can't tell you what percentage of the cars loaded by the Southern Pacific in western Oregon are of Southern Pacific owner-
1926 ship, but I can tell you what the interchange is at Ashland in empty cars, if that would help you any, as between system and foreign. In 1926 the lines south of Crescent Lake and Ashland, Southern Pacific lines, delivered to the Portland division 10,215 empty system box cars and 19,546 empty foreign box cars—practically two for one. Now, as to auto cars, the number was, system cars, north, 511, and foreign empty auto, north 4,798. (3499.)

Q. (By Mr. DEY.) Now, those cars were brought into Oregon, in the main loaded with lumber, taken east through Ogden, and eventually reached their own lines?

A. Well, those cars when coming to the Portland division were available anywhere that their ownership allowed them to go. The foreign cars naturally were used mostly to afford cars for off-line shipments through Ogden. The system cars, generally speaking, rotate on the system. It would be the foreign cars that were brought to the Portland division that would in preponderance go to the other lines.

When those foreign cars reach their owners in the East, they are loaded by them and they send them anywhere that they choose when they get on the home line—they may be sent south or to the Atlantic coast or anywhere else.

Yes, it is a fact that there is a constant flow, in a circle, entering our territory through Tucumcari and El Paso, being unloaded in southern California, brought up into Oregon, and then sent out through Ogden.

I think I have testified that we accumulate these cars in southern California, from our connections at El Paso and (3500) Tucumcari, and explained how the cars are made empty in southern California and are brought to Oregon. I guess I didn't complete
1927 the circle.

Mr. DEY. Mr. Corey testified in this case, Mr. Burckhalter, that there had been no car shortage in Oregon since the completion of the Natron cut-off. Does that tell the whole story, and, if not, why?

A. No, I think not. I think there has not been a car shortage for three or four years prior to the completion of the Natron cut-off.

Cross-examination:

Q. (By Mr. MCCULLOCH.) Will you turn to Exhibit 103, please, and name your company's connections at Ogden?

A. They are the Union Pacific, the Oregon Short Line, and the Denver & Rio Grande.

Q. Are coal and flat cars used for lumber loading from western Oregon, as well as box cars?

A. They are used in very small number for loading out through Ogden. However, the point I made on that was that they were (3501) not hauled empty through Ogden to Oregon. They were hauled empty from California to Ogden, by reason of the fact that so many loaded cars came West as compared with the very few loads that go East.

1928 Q. To and from California how does the loaded and empty movement compare? That is, on the Northern lines from the East the empty car movement westbound very much exceeds the empty car movement eastbound, I have heard testified a good many times. Is that the situation so far as California traffic is concerned?

A. Between Oregon and California?

Q. No, no, between the East and California.

A. Well, I gave you the picture of it at Ogden here. The number of empty cars of the classes I have dealt with received from all the connections at Ogden were 6,991, compared with 45,574 loaded cars, notwithstanding that that gateway was underbalanced, and we delivered an excess of 14,000 cars to the Ogden gateway of those classes, which would normally mean a very heavy balancing empty haul, but it didn't occur. We sent more cars east through Ogden than we received west by 14,069 on the Ogden gateway of those classes, which would normally mean a very heavy balancing empty haul, but it didn't occur. We sent more cars east through Ogden than we received west by 14,069 on the four classes, box, auto, coal and flat; notwithstanding that fact, we only received slightly under 7,000 empties west.

Yes; we delivered empty in that year to our connections at Ogden 9,687 cars. (3502.) And you will note that the big figure there is coal cars. That comes from the fact that we haul a very considerable amount of Utah coal into California, principally for domestic con-

sumption, and we are not at all able to find loading for those cars back, and we have to haul a great many of them back empty.

Q. Well, how would this picture shown in this exhibit be changed if you included refrigerator cars and tank cars?

A. Well, I will be glad to give you the figures. I have them here separately for the three carriers, and I didn't put them together, but I can read them into the record. I think I will first deal with the Union Pacific, because that is our principal connection at
1929 Ogden. In the year 1926 we received from the Union Pacific 9,151 loaded refrigerator cars and 55,504 empty refrigerator cars. We delivered to the Union Pacific 67,366 loaded refrigerator cars and 11,057 empties. That makes a total received 64,655, and a total delivered of 68,523, or an excess delivered of 3,368 cars for the year, excess delivered to the Union Pacific.

Now, the same cars we received, if you don't want me to take the time as between loads and empties, we received from them 1,800 tanks and gave them 1,772, and the balance at the end of the year was 28 received in excess of that number delivered. (3503.) We received an excess of tank cars by 28, loaded and empty. You understand that 28 cars—a day's business might balance that up. That is about as near nothing as you can get. (3504.)

Exam. ROGERS. As regards tank cars, where are those tanks going? Are any of them coming up here?

A. Well, we received 402 tank cars from the Union Pacific loaded, and we delivered them 1,404 loaded foreign and 15 system. Those cars are moving eastbound, principally commercial oils, not only fuel and gasoline but some cocoanut oil and things of that kind. West I think the business is mostly oil also. That represents some cross-haul. There is only 402 cars in the year—maybe some acid. Do you wish the stock cars now?

Q. (By Mr. MCCULLOCH.) Well, is there any substantial or heavy movement of stock cars?

A. The stock car movement was 1,986 received and 1,913 delivered; excess received 73. As I endeavored to explain when I first talked to this exhibit, I left those tank and stock and refrigerator cars out because I didn't think they would help the picture.

1930 Q. Yes. Now those were merely for the cars delivered to and received from the Union Pacific Railroad?

A. Yes. Now I can give you the Short Line.

Q. Or also the Short Line?

A. No; that is the Union Pacific itself.

Q. Yes; all right. (3505.)

A. Now we have a separate interchange for the Short Line, if you want it—the interchange of refrigerator cars—off the record, please. I am going to give you these figures rather briefly, and if you want them in more detail we can put them in. We received from the Oregon Short Line of loaded and empty refers 1,003, and we delivered them 1,501, an excess delivered of 498. Stock cars: We received 799 and delivered 790; excess received 9. Tank cars: We

received 179 and delivered 165; excess received 14. This is all the year 1926 I am giving you.

Denver & Rio Grande, refrigerator cars, total received 399, total delivered 1,949; excess delivered 1,550. Stock cars: Received 684, delivered 670; excess received 14. Tank cars: Received 87, delivered 104; excess delivered 17. (3506.)

Q. Now this Exhibit 103 would indicate that the Southern Pacific delivered to its connections at Ogden more traffice for the year 1926 than it received at Ogden from those same connections by something over 11,000 cars. Is this representative, this year's statement, of the general relative proportion of delivered and received traffic at
1931 Ogden in other years, would you say? I am speaking now from the standpoint of delivering more business there than you get back.

A. It is generally representative; and that effect is tremendously augmented above the effects here shown when you take the refrigerator traffic into account.

Q. All right; that is what I had in mind, in addition to the figures shown on this exhibit. Now keeping in mind your Sunset route, and via that route, does the Southern Pacific carry east and turn over to its eastern connections more traffic than comes in over that route and reaches destination in California?

A. Yes.

Q. So that by both routes the traffic of the Southern Pacific finding destination in California is substantially less than the traffic originating in California and moving east and delivered to various eastern connections?

A. That is true. (3507.)

Exam. ROGERS. In what kind of cars, Mr. Burckhalter? What kind of traffic is that true on?

A. Well, it is very preponderatingly true as to refrigerator traffic.

Exam. ROGERS. Well, suppose you exclude the refrigerator cars, then what is the situation?

A. Well, the situation at Ogden is as shown on my exhibit for the year 1926. I haven't made an exhibit of El Paso. I can tell you as to box and auto cars at El Paso, that in 1926 we received 11,741 plus 37,621 loads west, and we delivered east 31,980 loads. So as to the El Paso gateway we received more loads west than we delivered east in house cars, box and auto cars—about 18,000.

Q. And have you any figures for that same year as to the interchange at Tucumcari with the Rock Island?

A. Well, I should correct my statement by saying that these
1932 last figures I used were both El Paso and Tucumcari combined—I think of that as one gateway.

Comr. MCMANAMY. Tucumcari cars all go through El Paso, don't they?

A. That is the point; yes, sir.

Q. (By Mr. McCULLOCH.) Well, what I had in mind at the beginning, in asking you these questions, was whether the loaded (3508) movement to or from California preponderated westbound or eastbound via both routes, the Sunset route and the Ogden route. Taking it all together, in all kinds of traffic, year in and year out, what is the situation? Does the westbound loaded movement preponderate, or the eastbound loaded movement? I am referring to all your carload traffic, in refrigerators, tank cars, everything else.

A. The refrigerator cars move out of California in very strong proponderance loaded as against coming west empty. That is because, as I say, all the railroads load some 130,000 or 140,000 carloads of perishables in refrigerator cars to go east.

Now as to the box cars, my exhibit shows box, coal, auto, and flat—my exhibit shows that in the year 1926 there were about 11,000 more cars went east than came west through the Ogden gateway. I have just told you that in the same year at El Paso about 18,000 more cars came west than went east in box and auto cars. Now does that answer your question?

Q. Well, I got the impression from your testimony that the westbound loaded movement into California, and particularly into southern California, was such that you were able to (3509) supply, when those cars were unloaded in southern California, a constant stream of many thousands of empties for lumber loading in Oregon.

A. Yes.

1933 Q. That is, that you could supply the needs both of California shippers for loading east and of western Oregon shippers for loading east, from the cars that were made empty in southern California, that had come loaded from the East into southern California. Now was that what you intended?

A. That is generally true. I don't confine myself to southern California. We get some cars in central California. But the point is that Oregon always needs far more cars to load east than it begins to supply itself by unloading cars that have come to it loaded from the East. That is shown by all interchange figures, and by Mr. Newell's estimate. He only has a handful of cars coming out loaded to Oregon, against probably 28 or 30 times as many going east loaded.

Now in general we have been able to accumulate the empty cars that we need to handle the business out of Oregon by bringing up the surpluses that accumulate in southern California and central California, and I believe at times we have hauled cars from as far as El Paso to help the situation out.

Q. Does this supply of empties that you have in central and (3510) southern California after the loaded cars that have come west are unloaded, supply also the needs of California shippers as well as those of western Oregon, for cars to be loaded for movement east?

A. The cars that come out, either loaded or empty, are available for loading. If a car comes out under load to California we can load

it back if we have the load there, from California, or we can send it up here to Oregon. But cars that come out, either loaded or empty, are available for loading in the opposite direction.

Q. I appreciate that, but isn't it a fact that in addition to the cars that are made empty in central and southern California that
1934 have moved west loaded, the Southern Pacific constantly is bringing empty cars through the Ogden and El Paso gateways for the purpose of being loaded with California and Oregon products for shipment east?

A. Well, I have shown you on my exhibit just how many cars came empty through the Ogden gateway in 1926.

Q. Yes. Now, have you also shown how many came through the El Paso gateway?

A. No; I have not.

Q. Can you do that?

A. I can give it to you for box and auto cars. We received empty cars at Tucumcari and El Paso in 1926 to the number of 8,591, and we delivered cars empty through the same gateways (3511) to the number of 16,243. We delivered more than we received. This includes box and auto cars. I have the figures for refrigerators and other classes of cars, but they are not consolidated.

You will find that El Paso, as to refrigerator cars the situation is about like in Ogden. There is a tremendous preponderance of loads going in and very few loads coming west. Do you want those figures?

Q. Well, can't you give the movement of empty refrigerators westbound received by the Southern Pacific at El Paso or Tucumcari or both?

A. Well, I can give it to you, but it is a good many different places here.

Q. Well, could you compute it at noon, then, and give it after the intermission, if it takes some time now?

A. Yes.

Q. Is it a fact that, generally speaking, year after year there is a flow of empty box and auto, refrigerator, tank, and other classes of cars westbound, that the Southern Pacific receives at Ogden, Tucumcari, and El Paso?

1935 A. Well, there is a very pronounced flow of refrigerator cars (3512) empty. There is a very limited flow of the other kind of cars, as shown on my exhibit, in 1926, at Ogden. I have not reduced other years, but I think 1926 was quite a typical year as to the movement of empty cars—empty box and auto cars through Ogden.

Q. Would you say, Mr. Burckhalter, that empty box cars have not been, or are not being, moved from El Paso, or Tucumcari, or Ogden, empty for loading of lumber—moved empty into west Oregon for loading of lumber?

A. Well, as to individual cars, there may have been individual cars that were hauled through Ogden, but the true measure is the

net result, and I claim that in the net result there was not the equivalent of a single car hauled through Ogden empty in 1926 that helped to move anything out of western Oregon through Eugene.

As to El Paso and Tucumcari, it may be that none of them came through El Paso. I guess, from these figures I have just given you, we can't conclude that any of them came through El Paso.

Exam. ROGERS. How would El Paso be involved, anyhow? (3513.)

A. I don't think El Paso is involved from the standpoint of contributing empties to afford loading, or to afford cars for loading on Oregon lines, except to the extent that empties might have come through there. I think there were not any, in fact, on the year's basis, that came through, because I have shown we received only 8,591 as against 16,243 delivered at El Paso.

Exam. ROGERS. What I have in mind, Mr. Burckhalter, is if the cars are going to continue to come through El Paso empty, there is no way of effecting this saving on the cross-State line on these empties?

1936 A. No; that is very true. The cross-State line, whether built or not built, is not going to have any effect that I can see on the movement of traffic through the El Paso gateway.

Q. (By Mr. MCCULLOCH.) Mr. Burckhalter, would there be any less cost in your judgment of moving an empty car from El Paso into western Oregon for lumber loading than of moving an empty car, as you assume, from Omaha over the Union Pacific system lines through Crane and Crescent Lake into western Oregon for lumber loading?

A. Oh, I think the cost probably is about the same per mile. (3514.)

Q. Well, you assumed that if the cross-State line were built and cars for lumber loading were moved west empty, that they would move clear from Omaha, didn't you, into western Oregon?

A. Yes.

Q. Are you less ready to assume that with the completion of the Alturas line empty cars for loading of lumber in western Oregon will not move empty from El Paso or from Ogden?

A. I think they will not move west from Ogden for loading Eugene and north, and that they will not move empty from El Paso.

Exam. ROGERS. In justifying the Alturas line, do you rely there on the movement of empties over the Alturas line to this western Oregon territory?

A. No. I think we will rely on moving the empties from central and southern California, as we do to-day.

Q. (By Mr. MCCULLOCH.) On this Exhibit 103, it shows for the year 1926 cars delivered that you received at Ogden from your connections; can you say how many, or what per cent of those cars delivered, were in southern California?

A. It would be very, very few. Under the commission's order in the Central Pacific case we are not allowed to solicit business
1937 for movement through the Ogden gateway for (3515) points south of the Tehachapi Mountains; so if any of this business moved from southern California it could only move without our solicitation, and I think the number of cars moving from southern California is very, very small—negligible.

I have been in the employ of the Southern Pacific Company at times when western Oregon was experiencing periods of car shortage. I could not say, in such periods, whether the Southern Pacific Company has ever moved whole trainloads of empty cars from El Paso to relieve the situation in western Oregon. When I was here in Oregon as superintendent, and that is when the car shortages were, I never knew where the cars came from, except they came to me at Ashland. I think they were principally originated at Los Angeles.

Q. Do you know anything, Mr. Burckhalter, of the ability of other carriers than the Southern Pacific Company to furnish empty cars to Oregon shippers, either in western Oregon or elsewhere in the State, for loading?

A. Why, I think the other carriers have the ability to furnish all the empty cars that they need to handle their business, just the same as we have.

Q. You don't know of the conditions on their lines in that (3516) respect as you do on your own, I assume?

A. I know generally that the neighboring carriers are able to supply their shippers with cars, and that we are also. I think that is a matter of common knowledge.

Q. What do you know of the empty and loaded car movement on the Union Pacific system lines to and from Oregon?

A. Well, I know what Mr. Newell has in his report; that is, I accepted it for its face value. That is on page 60.

Q. And what you know on that subject is what you find in Mr. Newell's report?

1938 A. Well, it is this way: I have heard a great deal of testimony, and I have figures in my files that show the gateway movements on all the Northwestern lines of the loads and empties over extensive periods, but I haven't them here. And I have checked them over repeatedly, and my impression is that their situation is about like ours at Ashland; that is, that we bring in about 60 empties into Oregon through Ashland and Crescent Lake for every 100 loads we take out; and my impression is that that is very closely the situation with all these northern carriers as to their Oregon and Washington traffic.

Q. With respect to your testimony on this empty car movement and its cost, is it your judgment that the cost of providing empties for western Oregon traffic will be more or less for (3517) movement over the Alturas route than over the cross-State route, assuming that line were built?

A. Well, if you will tell me where the empties come from, I would venture an opinion.

Q. Well, I thought as you had assumed that if a cross-State line were built and the traffic from western Oregon moved over it that the empties would come from Omaha, that you would be equally ready to assume where the empties would come from when the Alturas line were built, assuming that the western Oregon traffic moved over it.

A. The traffic will move over the Alturas line in empty cars that come just where they come from today. We are not going to change the situation as to empties by building the Alturas line, except that the few empties we might haul through Ogden, which I have explained on my exhibit, would be utilized to take care of traffic in Josephine and Jackson and Klamath Counties; if a few of those did come through they would naturally come Alturas instead of Roseville after the Alturas line was built. But I pointed out to
1939 you that I think all of these empties would readily be consumed on the Fernley-Lassen branch, and, therefore, that the cars loaded in Josephine, Jackson, and Klamath Counties would have to come from California, after the Alturas line is built, just as they come today. (3518.)

Q. Well, would you assume, then, that if the cross-State line were built, that the empties for loading lumber and other traffic to be moved east over the cross-State line, would come from the same sources, and in the same manner, and be supplied by the same lines, as the empties for the loading of traffic at points on the O.-W. R. & N. in Oregon and western Washington at the present time?

A. I would assume that if the cross-State line is built that the Union Pacific will have to haul enough empties into Crescent Lake, over the cross-State line, to balance the interchange.

I believe the Union Pacific would have to do this in order to balance the interchange created there by the construction of the cross-State line. That is, if they took 100 loads out of Crescent Lake, east, and brought in 10 loads delivered to us at Crescent Lake, then it would have to bring in 90 empties also to keep the interchange balanced. They don't have to do the same thing at Ogden because we have the cars in California and we don't want to (3519) haul them all the way from Ogden to Oregon when we only have to haul them from California to Oregon.

Q. (By Mr. McCULLOCH.) On what was your assumption based, Mr. Burckhalter, that the Union Pacific, in providing empties for western Oregon traffic, assuming the cross-State line were built, would have to haul those empties all the way from Omaha?

A. Well, that is where Mr. Newell hauled them from. He claimed a saving of 60 per cent all the way from Omaha.

Q. I think you are mistaken on that.

A. I also indulged in that assumption because the O.-W. R. & N. Company is already hauling empties, in very large volume,

1940 through Huntington today. Now, if they need still more empties, why, they are going to increase their empty haul. I don't know where they are going to get them short of Omaha.

Exam. ROGERS. Mr. Burckhalter, in considering the matter of saving as Mr. Newell has proposed the empties to move, would you also have to consider, if the empties were going to move via the cross-State line, the added expense that would be incurred in the movement of cars made empty in California and moving empty to the East, when loaded? What I have in mind is, you are going to have these empties in California, even though you do move the empties in across the cross-State line. As I understand your testimony, you are now able to utilize those empties made empty in California in loading in western Oregon? (3520.)

A. Well, from Los Angeles, for example, to Crescent Lake, it is 882 miles. If we haul a car today, like a Rock Island car, that is empty at Los Angeles, up to Crescent Lake, it is 882 miles. Now, if we hauled it back to El Paso it is 814 miles, when the Rock Island—or Santa Rosa—is about 1,000 miles. When we get it there the Rock Island would have to haul it several hundred miles further to get a load for it, undoubtedly; and it looks to me that whenever you try to follow this situation through as against not utilizing the empties in California for Oregon loading, that you just keep going from bad to worse all the time. I think the cross-State line cars brought out over the Union Pacific will have to incur at least the mileage from Omaha, maybe beyond, on an average. As against that, the surplus we hand back at El Paso and Tucumcari as comp'red with hauling it up here, will have to be taken by our connections there probably and hauled many hundreds of miles on east again, unless they find some way to cross-haul them, like in the Mississippi Valley or in the intermountain country somewhere. (3521.)

1941 Q. (By Mr. MCCULLOCH.) Mr. Burckhalter, I understand that traffic south of Divide, Oregon, now moves via Ashland and Roseville and Ogden east, and traffic north of Divide via Eugene and Crescent Lake; is that correct?

A. That is correct when the routing is left in our hands. There is some traffic of course that is routed through Portland, like the broccoli from Roseburg.

Q. I was speaking of unrouted traffic. What considerations determine that you would send traffic from points south of Divide via Ashland and Roseville, and traffic from north of that point via Eugene and Crescent Lake?

A. Well, the theory was that the traffic should be handled the easiest way from an operating standpoint; and it was on that basis that Divide was taken as a point north and south of which the traffic should flow through those different gateways—when moving to Ogden, for example. By easiest route, I mean the most economical and the most efficient route from an operating standpoint. (3522.)

Q. And would the factors of distance and time be important elements in determining whether a route was more efficient and more economical than another route—time in transit and distance of haul; would those be important factors in determining the efficiency and economy of one route as against another?

A. Well distance is a factor, when other conditions are equal; and time is a factor generally, not always.

Q. You compared the saving in distance via the Alturas route and via the Roseville route on pears from Jackson County. I understood that that saving in distance was 41 miles.

A. Yes. And I believe I said the saving in time was 11 hours on pears via those two routes.

There would be a saving of 212 miles on a movement of
1942 lumber from Klamath Falls to Ogden by the Alturas route as compared with the present Roseville route. I have not computed the saving in time. (3523.) It might save about a day, I guess; that is, providing it moves as lumber in slow trains.

Q. Well, is that the way lumber, or the great bulk of the lumber traffic from western Oregon does move?

A. There is a good deal of it moves in slow trains, and a good deal of it catches faster trains, filling out fruit trains, and so on.

I want to point out, though, as I did before, that on a long haul 100 miles or 200 miles is not anything that is going to prevent schedules being equaled by competitors.

Q. What do you mean by a long haul? How long would a haul have to be to make a saving of 100 miles or 200 miles unimportant as between routes?

A. Why, I think any of the haul on business going into transcontinental territory or intermountain territory; that is, say, Granger and beyond Granger, I don't think it would make any difference. On business where time was important and the business was (3524) solicited on a schedule movement, why, the road, whatever road it was, that had somewhat longer line would arrange to make the time. That is true anywhere.

Q. Yes. I understood you to say that the investment of approximately $6,000,000 in the Alturas line was being made primarily to provide a shorter and more economical through route to the East; that that was the primary consideration; is that correct?

A. I believe I said that originally the savings resulting from diverting traffic over the Alturas line accounted for nearly 50 per cent of the income we figured on the increased investment represented via the Alturas line, including the N. C. & O.; but that since that
1943 time the picture had changed somewhat and the Northern lines had come into the territory and probably now the saving we will make on diverting traffic through Alturas will be something over 50 per cent of the earnings we will get on that investment.

Q. Well, would it be fair to say, and correct to say, that the primary reason for the building of that line was to provide a shorter, more economical, more efficient route for the movement of through

traffic from the Klamath country and western Oregon to and from eastern transcontinental territories?

A. No; I don't think it would.

Q. What was the primary reason, then? The development of the country through which the Alturas line will pass, and the (3525) earnings to be anticipated from local tonnage originated by it?

A. I don't think that when the reasons are so nearly equal, that either one of them might be called primarily properly. As I have endeavored to explain, in the original set-up the savings through diverted traffic were a little less than 50 per cent of the estimated net income applicable to the investment, and now we think because of the Great Northern's entry into Klamath Falls that the savings on that diverted traffic will probably be a little more than 50 per cent of the net income on that investment. In other words, the reasons were pretty well equal.

Q. I see. That is what I wanted to know.

A. Before and after.

Q. All right. Would it follow from that that the Southern Pacific, in all probability, would not have undertaken the construction of the Alturas line solely for the revenue to be anticipated from tonnage that would be originated local to that line, if and when built?

A. I don't think they would have built it for the local business; not at this time, at least; that is, the local business alone.

1944 Q. Yes, Mr. Burckhalter, after the Alturas line is built and put in operation, how far south will it draw traffic from western Oregon for that route as away from the route through (3526) Ashland and Roseville, would you say? From an operating standpoint, how far south will it be desirable to go and take the traffic up north, through Eugene and Crescent Lake to Klamath Falls, and over the Alturas line, instead of sending it down through Ashland and Roseville east?

A. I could not say accurately. I have not made any investigation of that. We are to-day, as I say, breaking at Divide. We have left that in the hands of the local superintendent, and he tells me that is what he is doing. We ask him to use his best judgment as to which way he will move that traffic.

There is very little traffic originating between Roseburg and Divide, and such as there is, if moved through Crescent Lake, would have to be hauled uphill to Divide. So the superintendent is using Divide.

I have not made any study to show where the proper theoretical breaking point is between Eugene and Black Butte Summit as defining the line where the traffic should move, on the one hand, through Black Butte and Klamath Falls, and, on the other hand, through Crescent Lake and Klamath Falls, which I understand is your question.

Q. Yes; that is what I had in mind, whether it would move south, then up to Klamath Falls and over the Alturas, or whether it would

move north to Eugene, then through Crescent Lake and over the Alturas. (3527.)

A. Well, I haven't studied it, but in a general way I think that point would lie at Divide or Roseburg, or in between. That is a very general answer, though.

Q. Yes. After the construction and operation of the Alturas line, in your judgment will any traffic from western Oregon
1945 continue to use the Ashland-Roseville gateway, going east through Ogden? By western Oregon I mean anything north of the California-Oregon State line.

A. No, I think not, unless possibly the Medford fruit. As I explained, that might continue to go through Roseville; while I think the lumber tonnage, anything like that, would surely go through Klamath Falls and Alturas, where they are originated on the old Siskiyou line as well as on the new Natron line. The saving in distance is 41 miles. No doubt the equated distance would be somewhat longer.

Q. You mentioned, in computing the time in transit via the cross-State line, the Alturas route, the present Roseville route to Chicago on perishables from Jackson County and from Douglas County different aggregate periods for the time in transit, but then you went on to say that the schedule of all the competing routes would undoubtedly be the same, and if there were not enough differences in distance to make it (3528) impossible for any of the routes to meet any schedule that might be made; was that substantially what you said?

A. I think so.

Q. Now, does that situation come about customarily; by agreement between the competing routes to that end, or does the line that is most favorably situated as to distance and to give the shortest time in transit, fix the schedule and considerations of competition compel all their competitors to meet that schedule?

A. Well, speaking generally, if one line has a decidedly direct route, that line naturally makes the schedule. If, however, there are other lines who find it practicable to compete with the direct route, they do so.

Now as to these fruit schedules, the distances over the various lines out of central California and out of southern California do
1946 not vary greatly, and the schedules are made by conference with the railroads and shippers, and if the shippers like a prompt schedule the railroads agree to as prompt a schedule as they can, and they all agree to the same schedule, which is 154 hours out of Roseville, or Colton to Chicago.

Q. I was wondering in connection with these estimates of the time in transit to Chicago on broccoli from Roseburg via these different routes—via Portland you estimated it at 190 hours and via Alturas south through (3529) Ashland to Black Butte and then north to Klamath Falls 192 hours; via Alturas, coming north from Roseburg to Eugene and through Crescent Lake, 185 hours, and via Crane and

the cross-State line, 178 hours. Now in that situation would the schedule time for the movement of broccoli from Roseburg tend to be 178 hours—that is the time that could be made as you estimated over the cross-State line, assuming it were built—and would the fact that the time could be made 178 hours over that route make it likely that that would be the schedule established which the other routes would meet? That is what I was getting at and what I had in mind. In other words, would the existence of this shorter route via Crane and the cross-State line have the effect of providing a more expedited service over competing routes?

A. Well, these figures I have drawn up I regarded as what might be called a natural time to handle the business over the several routes, irrespective of the presence of the other routes. I got that by taking the several mileages, and, as to the movement over the Siskiyou line I used 11 miles an hour through, because that is the time we now have on the Medford fruit block. As to the other routes, that is via Alturas on the one hand and Crane on the other, I used 12 miles an hour in both cases. And by using that same miles-per-hour, I got this variation of figures that you call attention to. And then I point out that that difference is not (3530) considerable.

1947 It is not so much but what we could equal it through Alturas, or, if the tables were turned around, the Union Pacific could equal it through Crane.

Now, of course, to make any sort of a schedule like that you can't handle that business in a local train; you have got to put it in a through train to make about that time. I don't know whether the cross-State line would establish such a schedule. I was asked to figure up what approximate schedules might be, and this is what I have done, pointing out, however, all the time, that wherever the business is of any consequence no carrier that has a slightly longer line is going to foreclose the business.

Q. Well, if that is so, Mr. Burckhalter, and the cross-State line could and did establish a schedule of 178 hours on broccoli from Roseburg to Chicago, wouldn't that tend, then, to induce and bring about improved service and faster service down to the same basis over the competitive routes? Wouldn't it have that effect?

Exam. ROGERS. Isn't that a deviation from the hours you stated? Did you say 178 hours via the cross-State line and Crane to Chicago? I thought you said 187.

Mr. MCCULLOCH. No; 178 hours on broccoli from Roseburg via Crane to Chicago.

Mr. DEY. That was from Medford, Mr. Examiner. That was (3531) 187 hours from Medford by way of Crane on perishables.

Exam. ROGERS. Rogue River fruit; that is right.

The WITNESS. If the cross-State line set up a schedule of 178 hours, that would be about 12 hours faster than the business is enjoying to-day, and if they did that we would certainly meet that schedule, and, I think, get all the business.

These estimates of time in transit that I have made on pears and on broccoli are elapsed time clear through.

1948 There are icing facilities at Roseburg and Portland and Klamath Falls, Medford, and Ashland, but none at Eugene.

I could only give you a rough estimate of the time in transit of a slow train carrying lumber from Eugene to Ogden via Roseville, which is the only existing route now. A rough (3532) guess would be 10 miles an hour, including terminal delays, connections, and everything of that kind. We have no lumber schedule from Klamath Falls to Chicago that I know of. I have not made any investigation to determine the average or approximate time of a car of lumber in transit from Klamath Falls to Chicago, including the elapsed time.

I have no explanation of why all of the broccoli from the Roseburg district has not moved east via Roseville and Ogden instead of much of it via Portland. I believe Mr. Mulchay knows all about that.

It is 99 miles from Crescent Lake to Klamath Falls.

Q. I understood you to say that you expected to see more business for the Alturas line than for the cross-State line, if that should be built. Do you refer to local tonnage originated, or through business, or both kinds of business, when you said that? (3533.)

A. Both.

Q. You mentioned a delay at Crescent Lake due to the interchange at that point, if western Oregon lumber were turned over there by the Southern Pacific to the cross-State line, as compared with its movement east down to Klamath Falls and thence east over the Alturas line when built. Well, would trains carrying lumber from Eugene or western Oregon points move down over the Cascade line to Klamath Falls and right through Klamath Falls without being broken up and being put into another train for movement over

1949 the Alturas line? How would that lumber traffic be handled there? Would there be any delay due to an interchange or handling at Klamath Falls?

A. Yes; the business would be set out at Klamath Falls and picked up in an Alturas line train. But I drew the conclusion from the fact that I think the traffic would be heavier on the Alturas line and, therefore, the connections more numerous, and a one-company operation always can adjust itself to closer connections than a two-company operation. If the business left Eugene and it went across a cross-State line it would be set out at Crescent Lake. If they had one train a day there, why it would have to wait until that train went out. If it waited 5 hours or 6 hours, why our train would be in Klamath Falls by that time, I think. (3534.)

Q. Well, even if it was handled that way, then after it was put in the train at Klamath Falls would it stay in that train until it got to Ogden, or would it have to be taken out of the train and put in another train at some other point even before it got to Ogden?

A. Well, I think it is very likely that that business would move through from the line Alturas to Fernley, through to Ogden in one

train, that is, in the same train. But when it got to Ogden it would have to be interchanged there to go on east.

Q. Do you believe, then, considering a destination east of Granger, Wyoming, that there would be any more interchange service or any more delays incident to the handling of a car of lumber from Eugene at points where it would have to be taken out of one train and put into another if it moved over the cross-State line than if it moved down to Klamath Falls and then over the Alturas line and then through Ogden and east of Granger?

A. I think there would be considerably more delay, on an average, on the Crescent Lake interchange than on the Klamath Falls
1950 interchange; otherwise I consider the interchange situation as a terminal delay proposition equivalent after the business gets started out of Crescent Lake, on the one hand, and Klamath Falls on the other. (3535.)

Q. You would think that there would be nothing to choose between the delay due to interchange in handling beyond Klamath Falls or Crescent Lake to a destination east of Granger?

A. Yes.

Q. All right. Now, have you made any computation of annual savings that you anticipate will be effected by the use of the Alturas route on western Oregon traffic, instead of the existing Roseville route?

A. We made studies at the time of our application to the commission for the certification of public convenience and necessity to build that line. We haven't made any study since. That study showed a savings of $17.05 a loaded car, on 23,130 loads, for a period of one year. The total savings amounted to $393,300.00.

Q. (By Mr. McCulloch.) Which was the estimated annual saving on that movement that in the judgment of your company justified (3536) an investment of $6,000,000 to build this line, plus such traffic as it hoped might be originated locally to the line, is that correct? Or, plus the revenue from such local traffic as might be originated by the new line?

A. Well, our estimate in the former hearing before the commission combined the Nevada-California-Oregon, and the Oregon, California & Eastern and the Alturas line, and our exhibit was worked up on the basis of all of those things being included, and among the items affording earnings to justify the expenditure was this one of the saving on haul over the Alturas line. Now, it wasn't allocated entirely to the line Klamath Falls to Alturas because the business went on down to Wendel, then it was all lumped together in
1951 our exhibit, as I remember it. I don't think we made any allocation of it to the Alturas-Klamath Falls line by itself. The total saving by reason of diverted traffic was $432,000.00 on our exhibit.

Exam. Rogers. Have you made any calculations, Mr. Burckhalter, to determine what would be the result according to Mr. Nevell's

study if you handled the empties as you do now but handled the loads over the cross-State line?

A. No; we haven't made such a statement.

Mr. DEY. Well, you can give the elements, can't you? That is $180,000.00, the savings on empties would have to be (3537) deducted from his savings, would they not, in any event?

A. Well, as I understand your question, Mr. Examiner, the loads will move out over the cross-State line and the empties will move as now? Mr. Newell's figure under such a premise would be an error to the extent that he is claiming saving on moving the empties, which didn't move. As far as your question goes, I presume theoretically there would be no adjustment necessary providing the cars continue to move that way, but I don't see under what theory they would continue to move as they are moving to-day unless the Southern Pacific got the load out.

Exam. ROGERS. Well, Mr. Newell's study, as I understand it, was to the effect that the division could be so fixed that it would be more profitable to the Southern Pacific, they would make more money in the long run, to turn the loads over to the cross-State line at Crescent than they do now handling it to Ogden. I was wondering whether that was entirely offset by this empty proposition that you referred to this morning.

A. Well, Mr. Newell attempts to set up the savings that will result as he sees them through the connetcion with the cross-State line, and then having determined that amount of money he proposes to
1952 let the Southern Pacific earn as much net as it does now by readjusting its percentages as may be necessary and the balance of that saving will all go to the Union Pacific (3538) and be increased net for them, and he in turn assumes that that increased net will be a credit and a justification for the construction of a cross-State line. Now, his error comes in first in that he includes in his estimated saving resulting from the construction of the cross-State line, a saving of $17.43 on 10,370 empty cars which he assumes would come over the cross-State line, but which do not come over the cross-State line and do not now come over the Roseville and won't come over the Alturas line.

Exam. ROGERS. Well, Mr. Burckhalter, suppose that the commission in considering Mr. Newell's exhibit determined that you are right about the empty movement, that that isn't the way it moves—it moves through California—would that knock out entirely this proposition of Mr. Newell's proposition, as you see it, or would there still be left the proposition as to possible savings on the loaded movement?

A. As I see it, in any event Mr. Newell is in error to the extent the figure on saving on the empty cars that do not move otherwise there would be no further error if the commission in its wisdom under its power concludes to say to the Southern Pacific Company in the first place that "You will route all your business over the cross-State line that comes through Eugene, and you will haul all

the empties that are necessary to load that business from California to make that movement possible." Now, if you will say both of those (3539) things to them and they are valid instructions, Mr. Newell is right except to the extent of this correction I have referred to.

Exam. ROGERS. All right, now, we will assume for the purpose of illustration that the commission has authority to do both, and that they are going to let the empty movement go as you
1953 say now—the next question will be, will the commission find, "Well, before we do this will the Southern Pacific—Can we fix the divisions so that the Southern Pacific will earn as much under the new arrangement turning the traffic over at Crescent Lake as it did before in handling it to Ogden, bearing in mind that the Southern Pacific is going to handle the empties"?

A. Well, it seems to me that you couldn't logically do that, if you were requiring the Southern Pacific to incur empty car haul in excess of what ordinary good practice and the interchange rules require. In other words, if we could get rid of these empties that we are now able to assemble by a shorter haul, having lost this business out of western Oregon, you couldn't compel us to make a longer haul on them, it seems to me, without compensating us for that.

Exam. ROGERS. Well, I know, we are assuming those things, but I want to know what your calculation shows as to the cost or saving in routing your loaded traffic via the cross-State (3540) line and handling your empties as they are, whether there is any authority for putting that in effect or not. I just want to know what the result would be.

A. Well, my studies will show that, using Mr. Newell's prices, we will get the same results as he does after deducting the erroneous inclusion of saving on empties, which is about $180,000.00 in the first year and is $262,000.00 the fifth year.

Exam. ROGERS. What would the net result of that be? Would you make more money delivering it to them at Crescent Lake than you do now?

A. The effect of that is that Mr. Newell is claiming a saving in the first year of $180,000.00, and in the fifth year $262,000.00, which show respectively in his Tables XXI and XIX as "Net Revenue to the cross-State line," those amounts being in error that should be deducted in Table XXI and Table XIX, and would, using
1954 his own methods otherwise, correspondingly reduce his total net revenue to the line. Those figures were just deductible from the final conclusion here in Table XXII on the bottom of page 142. Taking the first year, if you please, and looking at the fourth column over, where it says "Return," there should be $180,749.00 deducted from that figure, and on the fifth year—I didn't figure it intermediate—the deductions (3541) should be $262,150.00 from the $835,842.00.

Mr. DEY. Well, after deducting that would there then be enough left to give the Southern Pacific what he now gives it and put the Union Pacific in the clear and give it its cost? Take Mr. Newell's set-up, and give the Southern Pacific what he now gives it on divisions, would mean cutting down the total divisions or revenues that the Union Pacific is going to get by one hundred eighty thousand the first year and two hundred sixty-two thousand the fifth year, wouldn't it?

A. Yes.

Mr. DEY. Now the question is, although it would take some time for you to figure it out, but it could be done—(3542 whether or not that took the profit away from the Union Pacific and left them in the red in doing business?

Exam. ROGERS. I want to know whether Mr. Newell's study, as you see it, falls because of the way he handles the empty mileage?

A. Yes; it falls, for two reasons—one, that he has claimed savings on cars that aren't moving, and second, because he has assumed that he is going to have enough cars go into Crescent Lake to balance his business without having provided any way for them to get there.

Exam. ROGERS. Well, the Southern Pacific is going to handle the empties, under my theory, and the Union Pacific the loads. Of course, I know offhand that sounds good.

1955 A. That is rather a strange proceeding.

Exam. ROGERS. Yes; but I want to know what the result is by this method of computation.

A. I think under your assumption Mr. Newell's figures, from the standpoint of what we are now discussing, are only in error $180,749.00 the first year and $262,130.00 in the fifth year, (3543) from the standpoint that the examiner was discussing, namely, that the Union Pacific would haul the loads and we would haul the empties.

Exam. ROGERS. Well, under that theory, what would be the net saving after you subtract these amounts?

A. Well, Mr. Examiner, I didn't take the time to follow this all through, all these computations. I, just for short-cut purposes, took it off of the end. Page 142, Table XXII, at the bottom of the page—Mr. Newell shows that the return on the cross-State line the first year is $443,549.00. That includes handling these empty cars, and it is, therefore, in error to the extent of $180,749.00, which should be deducted from the $443,549.00. (3544.) That reduces it to some two hundred sixty thousand dollars the first year, and then the fifth year we should deduct $262,130.00, which will leave the return $573,000.00. The figure increases in the fifth year, because there are more cars handled, under Mr. Newell's set-up.

That is the saving of the cross-State line compared with the Alturas route, on the loaded movement, under Mr. Newell's process and under your premise of how we took it.

Exam. ROGERS. Well, what is wrong with that premise?

A. Requiring the Southern Pacific to long-haul empties and give the traffic to the Union Pacific.

Exam. ROGERS. Well, you can see what I am after. (3545).

1956 Mr. BURCKHALTER. I want to know whether, if the commission decides that you are right about the empties, that it can just forget about Mr. Newell's study, as you see it, or whether if it decides you are right about that, the empty haul, whether the commission would still have some consideration to be given to Mr. Newell's study?

A. Well, it seems to me that Mr. Newell's study isn't sound at all, for the reason that he hasn't provided empty cars with which to take away these loads. In the first place, he proposes in Table XXI to take 17,284 loads over the cross-State line east and only 788 west, so he has got to get 16,496 cars from somewhere else; and in the fifth year that 16,496 cars grows to 23,883, in his Table XIX, page 136.

Now, your premise is, from your last few questions, that the Southern Pacific, which now furnishes those cars from California, will continue to do so, as I understand it.

And I wish to suggest to you that that would be a very unusual proceeding, and it would involve the Southern Pacific in greatly increased empty car haul costs, above what it would enjoy under the ordinary rules of interchange. In other words, take a car at Los Angeles, for instance, why should we haul it clear up to Crescent Lake, when we can turn it back to El Paso, for example?

Comr. MCMANAY. The distances would be about the same either way? (3546.)

A. The distance is a little greater. From Crescent Lake on we would have some haul with the car. Of course, that is why I make it Crescent Lake. You have got the further condition there, and that is that through the years we might not have these cars. Now, if the time ever comes when we haven't got those cars—sup-

1957 pose that time had come in 1926, then instead of our delivering the Union Pacific in excess of 14,000 cars at Ogden they would have had to have evened up that interchange and brought enough empties out to enable us to get cars to bring into Oregon. That condition may come some time.

I don't know where they would bring these cars from. I think they would have to bring them from the far east. In principle they would have to bring them from about where the cars unload, except as influenced by local loading that they could put into those cars on the way back. In other words, if you ship a carload of lumber from Oregon to Chicago, you have got to haul that empty back to Oregon, because the preponderating direction is east out of Oregon, except to the extent that you can load that empty on the way from Chicago to Oregon with merchandise or what not on the way, loading it back as (3547) far back as you can find loading for it.

Exam. ROGERS. Well, what I was wondering was this—I heard somebody say in the grain case that there were numerous criticisms of Mr. Newell's methods in arriving at some of the data that he has

included here. Of course, this proposition of empty haul wasn't involved in that case as it is here. I am wondering whether you agree with Mr. Newell in other than the methods by which he handles the empty cars, bearing in mind, of course, that error that you pointed out this morning about the decimal point being in the wrong place?

A. No; I don't think Mr. Newell's cost data is correct. I don't think his methods are sufficiently refined to give a very close conclusion. I think his costs are very decidedly high.

Now, I base that conclusion on the work of one of our engineers who does this sort of work all the time; he has had long experience in calculating costs, and has perfected his methods to such an
1958 extent that he goes into a great deal more refinement than Mr. Newell attempts. That engineer is here, and he will tell you, as he told me, and tell you why from a brief examination of Mr. Newell's report, he concludes the cost figures to be very much too high.

Exam. ROGERS. Well, I am getting the cart before the horse. I thought that you were the only one we were going to have on this case. (3548.)

A. I want to say now, Mr. Examiner, that I don't profess to follow the engineering details through a report like this, because I haven't time to do such things any more, but naturally we have men on our staff to do those things.

Q. (By Mr. MCCULLOCH.) Mr. Burckhalter, I understood you to say that central Oregon is not a territory that the Southern Pacific should be required to serve, for the reason that traffic wasn't there to justify construction. That is about right, wasn't it?

A. Well, that was a part of my answer. It isn't all of it.

Q. Now, do not considerations of economy and efficiency also justify construction of extensions by railroads at times?

A. Yes; they do.

There have been instances of reconstruction, relocation of lines, justified solely from considerations of economy and efficiency that the Southern Pacific itself has made. The Great Salt Lake cut-off was a very fine example of that. (3549.) The line was relocated between Black Butte and Grass Lake—a section of about 25 miles. That was a line change for operating economy and better service, and was not for the purpose of originating any new tonnage.

Q. Turn to page 110 of Mr. Newell's exhibit, Mr. Burckhalter. He has shown there, has he not, in that middle column, under the heading "Road haul to or from Granger," the cost of hauling empty cars from Granger to Klamath Falls, first via Roseville, then
1959 via Alturas, then via Crane, in the aggregate, (3550) giving the references to the pages where the items of his cost are shown in detail?

A. Yes.

Q. Well, you don't contend that in this study Mr. Newell has disregarded the cost of empty car movement, do you?

A. Why, I claim that he has credited the cross-State line with savings in empty car movement, which figures per car I take right off of this same page—it is $17.43—and it appears opposite Douglas County and opposite other counties as saving of an empty haul over the cross-State line as compared with the Alturas line. Now, he applies that saving against all of the empties that he needs to balance the interchange in Table XII; he applies that or corresponding savings as he figures them to be, against 24,766 empties.

Q. Well, now, what is your criticism, for example? That as to the 4,480 empty cars westbound to load lumber in Klamath County he has used estimates of cars that are too high?

A. I think his costs are generally too high. Now, in his later studies he discards the Klamath County traffic. In his Tables XXI and XIX he doesn't figure on hauling the Klamath County traffic over the cross-State line. Now, my other criticism of that figure is that those cars didn't move empty from Ogden to Klamath County. (3551.) My claim is that they moved empty either from southern California or from central California.

Q. Have you made any computations of the cost of moving an empty car from Los Angeles or from San Francisco to Klamath Falls or Eugene, or any western Oregon point, to set over against Mr. Newell's estimates of costs via these different routes from Ogden to Eugene or Klamath Falls?

A. No; I haven't.

Q. Then your judgment that his costs are too high is based on no estimates of your own that you have made, but simply on your judgment or opinion?

1960 A. My opinion that his estimates are too high is based on the higher result he gets on savings on loads moving over the Alturas line compared with the savings that our very careful studies showed in connection with our preparation for hearing before this commission on the Alturas and the Klamath Basin cases, which I have previously referred to, and which I think you understand without my repeating. That gave me the first clue on it. Then I talked to our expert in the matter, Mr. Day, and discussed the percentages that Mr. Newell uses in dividing his costs as between direct and indirect, and after discussing the matter with Mr. Day I feel his costs are very considerably too high. Mr. Day, however, will explain that in more detail, being an expert in that line of business (3552) although he hasn't had time, if you please, to spend more than a few days on this particular report. To apply Mr. Day's method to what Mr. Newell has attempted to do I daresay will take three or four months to work this out. I would feel quite happy if he got it worked out in four months, working continuously.

Exam. ROGERS. Mr. Newell said he worked on it for two years.

A. Well, then, Mr. Day can do a lot more work than Mr. Newell can in four months. Mr. Day can apply his very much more refined methods to this problem and work it out in, I think, about four months. He can speak for himself, but he does a lot of work

for me and I watch him pretty closely and that is what I believe he can do.

This criticism does not go in any way to the savings Mr. Newell has estimated on loaded car movement.

I didn't make any deduction for his loaded car movements. I have only made the general statement that I think his costs are too high, and if so, his savings are too high. I am just dealing with the empty car proposition, and leaving the other to Mr. Day. (3553.)

1961 Mr. ELLIS. I have just a few questions that are not clear in my mind. I have very distinct recollections of the Union Pacific representatives taking just as positive a stand that Mr. Newell's figures of cost of haul were decided low, and I am wondering if you know of any conditions or factors which would cause your operating costs on the Southern Pacific to be substantially different than those on the Union Pacific?

A. Why, in our method of studying these problems we find that every freight district is different from any other freight district that we study, we find that every division is different from every other division on our own railroad, and our methods call for an analysis of each freight district and——

Exam. ROGERS. Mr. Burckhalter wasn't here when Mr. Newell testified, but didn't Mr. Newell say that the figure that would be applicable to the Southern Pacific would be too high for the Union Pacific? I thought that is what he told me about the three-mill rate that I asked hi mto apply, that it would be too low for the Southern Pacific and too high for the Union Pacific.

Mr. ELLIS. He was applying that on the cross-State haul, where the Southern Pacific had the uphill haul to Crescent Lake and the Union Pacific the downhill haul across the State. (3554.) I was asking it for a more general answer as to the conditions on the two systems.

Exam. ROGERS. On the system as a whole?

Mr. ELLIS. Yes.

A. Well, don't know what they are.

Q. (By Mr. ELLIS.) With reference to the saving in time on fruit across the cross-State line compared with the present Roseville route, I am unable to quite understand your figures. I note you claim there will be no more saving than 12 hours under the Roseville route on the cross-State route, although I understand your testimony

1962 to be that the average speed of the fruit trains is 13 miles per hour, and although the record shows a saving in distance of more than 400 miles, via the cross-State line. I am speaking of the fruit or perishables from Roseburg.

A. Well, the record doesn't show any such saving in miles, I think. I think you are mistaken about that.

Q. Well, do you have in mind what the saving would be from Roseburg?

A. In miles? Well, my figures make it 215, I think it is.

Q. Well, would it be correct to apply the rate of 13 miles per hour to that 213 saving?

A. My figure is 219 as the saving of the cross-State line over the Alturas line for a haul through Granger from Crescent (3555) Lake. The reason that that difference in miles doesn't figure out the same difference in time is that the main line schedule after the business gets to the Southern Pacific-Union Pacific route through Ogden is a little bit faster, according to my computation, which I believe is correct, than the schedule from Ontario to Chicago.

Q. Then you have made no difference in the speed of the train from the point of origin to the point where it reached the main line at Ontario or on your fruit block?

A. I used 12 miles an hour from Crescent Lake to Fernley, on the one end, and Ontario on the other, then I took the prorate of the through schedule from Fernley to Chicago on the Union Pacific-Southern Pacific basis, the Roseville fruit schedule, and a prorate Ontario to Chicago on the Union Pacific Rieth schedule on perishables. I believe my figures are correct. I wouldn't swear to them, though, because I didn't recheck them. It is all beside the point, however, because when this business gets to Crescent Lake, one railroad can't give it any faster run than the other from there; they both give it the same run.

1963 Q. Well, on the business from Eugene there would be a much greater saving of time than you have shown, would there not, via the cross-State line? (3556.)

A. I don't think so. The Roseburg fruit would move out through Eugene and Crescent Lake, and the saving, if any, would be the same as to all traffic that went through Crescent Lake, whether it went from Roseburg or from Eugene, because they all base on Crescent Lake time. The time is common from any western Oregon point to Crescent Lake; on business that moves through Crescent Lake the time is common to Crescent Lake.

The figures I was giving a few minutes ago were of saving as between the cross-State route and the Alturas route, based on 12 miles an hour from Crescent Lake to Ontario, on the one hand, and Crescent Lake to Fernley on the other hand, then coupling up with the existing through schedules. I allowed for a connection two hours at Ontario and two hours at Fernley. I didn't charge any delay at Crescent. (3557.)

Mr. ELLIS. Well, you have a difference there of only 7 hours in time, and more than 210 miles in distance. As I figure it, it would take at least a speed of 30 miles an hour on your fruit block to make your figures check out and you say they travel only 13.

A. I said that the Rieth-Chicago schedule, as I figure it, is 13.6 miles per hour, and the Roseville-Chicago schedule is 14 miles an hour.

Q. Well, if you cut that saving down to 7 hours, as you have shown it via the cross-State line under the Alturas line, would not the cross-State line have to operate at 30 miles an hour?

Mr. DEY. You mean the cross-State line, now, or the Alturas line?
Mr. ELLIS. The cross-State line, as against your 13 miles an hour on the Alturas line.

1964 A. Well, I am not running 13 miles an hour on the Alturas line.

Q. At 12 miles an hour?

A. In my example I run 12 miles an hour on the crossline and on the Alturas line to the junction with the main lines, respectively, at Ontario and Fernley, whereupon I picked up the pro rata of the existing through schedules Rieth to Chicago on the one hand, and Roseville to Chicago, on the other hand. (3558.) The Rieth to Chicago schedule, as I am informed, is 151 hours, and it is 2,050 miles, which I figured was 13.6 miles per hour. The Roseville schedule is 154 hours, and the mileage is 2,148, and that figures out 14 miles an hour.

Now, the greater distance from Crescent Lake to Fernley at the same speed manifestly loses some time compared with the run to Ontario, in elapsed time, but you make it up after you get on the main line because your schedule is somewhat faster.

Q. Well, would there be any saving in cost of ice to the shippers or to the carriers by reason of the shorter route via the cross-State line?

A. I don't think so, but I don't know anything about those ice charges. They are tariff charges.

Q. I am wondering if the substance of your testimony, Mr. Burckhalter, on this time in transit from western Oregon to the eastern markets is not substantially this—that so long as Oregon is to be given branch line service the Oregon producer of perishables is going to get into the eastern markets just a little bit behind the California producers, no matter what he does and no matter how short a route is made available to him?

A. Well, I don't think that is at all true. In the first place, Oregon is not getting branch line (3559) service. In the next place,

1965 the man who is farthest from Roseville, whether he is in California or Oregon, will not get as quick a run as the man that is closer to Roseville. That is true in California. A schedule is from what we call the assembling point, which for our railroad and for the Overland route in which the Union Pacific and the Northwestern participate, the assembly point is Roseville. Now you get 154 hours from Roseville to Chicago. What you get from your point of loading to Roseville depends altogether on your distance to Roseville and your volume with which your traffic moves. If you are out on a little bit of a branch line in California quite a ways from Roseville your business won't get a very fast move, comparatively speaking, to Roseville; but if your business is loaded from Fresno, for instance, where there is a tremendous concentration of traffic at certain times of the year and it is made up in a through train, it moves right up to Roseville in a hurry.

Q. Well, that is about the point I am getting at, Mr. Burckhalter, but isn't your statement substantially this, that even though a first-class line is built through central Oregon directly into the Willamette Valley, into the producing territories where perishables are available, they will continue to have slower time to Chicago than the California producers have?

A. Their time will be slower in the ratio that they are (3560) farther from Rieth, or the equivalent of Roseville. Now, the assembly point on the north here on the Oregon-Washington Railroad & Navigation Company is Rieth, as I understand it. I am not very familiar with that situation, but that is what I am told. Now, in central California the assembling point on the Southern Pacific-Union Pacific is Roseville; on the Western Pacific-Union Pacific route, or the Rio Grande, it is Sacramento; on the Santa Fe's line they make Bakersfield their assembling point in the upper end of the San
1966 Joaquin Valley. In southern California, south of the Tehachapi, Colton is the assembling point for the Union Pacific, Santa Fe, and Southern Pacific. Now, the schedules are all based out of the assembling point, and you will get the schedule time from the assembling point plus whatever time it takes you to get to the assembling point. Now, if you ship or load far from the assembling point, your time is going to be greater than if you ship from a point close to the assembling point, and as to southern Oregon it is far removed, relatively speaking, from both Roseville and Rieth, and naturally the schedule is longer. I understand, although I cannot qualify on rates, that they get the same rate notwithstanding that great long distance. They are on a rate parity. Their service cannot be quite the same with that great added distance; and it is further my understanding that there is no great urge for rushing these Rogue River Valley pears or apples east, but they get (3561) along very nicely as it is, and so far as my knowledge goes the shippers are very, very well satisfied with the service we are giving them. I don't know that the shorter time, if they had Roseville time, whether it would put another cent in their pocket. I don't think it would. (3562.)

I can't account for the fact that the producers of broccoli are routing a substantial part, the larger part of their broccoli shipments, away grom Roseville and through the Portland gateway, because I didn't investigate it. If the perishable traffic exists in western Oregon and there is a direct main line route east built on the standard basis, that traffic won't move just as fast from Oregon if it originates further from the assembling point than it does in California.

Assuming Eugene to be the assembling point for Oregon, as Roseville is the assembling point for California, with a schedule of 151 hours out of Rieff, I don't know what the schedule would be out of Eugene. It would be a comparable schedule; I haven't
1967 figured it, but it would manifestly be a good deal more than 151 hours, and it would manifestly be a good deal more than 154 hours to be comparable. (3563.)

Q. In suggesting the desirability of the route through Alturas, had you given any consideration to the fact that the proposal for the cross-State line was a standard main line construction, with a maximum grade of $\frac{5}{10}$ths of 1 per cent, as against a much lighter line with less ballast and with more severe grades on your Alturas line?

A. The grades are more severe on the Alturas line. As to the grade rate, I don't know how the rise and fall compares.

Part of the Alturas line is proposed to be 75 pounds on the Klamath Falls end. That rail, however, is nearly perfect. We will give you a good fast ride on that 75-pound rail. Whenever it is not fast enough we will put some 90 in. (3564.) The weight of the rail has little to do with the speed, providing the rail is in good condition and you don't run too heavy an engine over it. We took that 75-pound rail out of our line between Klamath Falls and Black Butte, and it is in perfect condition, and we took it out because we are running pretty heavy power now over the Natron line since we opened it up all the way through. We are running the 4,300 class passenger engines with 60,000 pound axle loads, and we don't like a 75-pound rail for that heavy a wheel, so we lifted it out because of its weight, not its condition. We don't expect to run that heavy power on the Alturas line.

When we were running considerably lighter power and had much lighter rails, we made about as much time as we do now. I think some of the runs in the early history of our railroad, when we had 50-pound rail and little teapot engines, as we now call them, were about as fast as anything we run to-day, when they wanted to go. In other words, the track was smooth and the power was light and it could move fast over a light rail.

1968 On our Alturas line, from Fernley to Klamath, generally, (3565) I think we would use our Consolidation type of locomotive, which we call C–9, which is about 183,000 on four drivers. I think that would be the ordinary type of engine. Then we have an engine that is a little bit heavier than that, of the Mikado type, that weighs about 210,000 on drivers. We would not put a Pacific, heavy mountain type, or a Santa Fe, or a Mallet. I think we will get along with light Mikados or Consolidations, to start with.

The amount of ballast, and the grades and curves and weight of rail are all important factors. The rail is a factor as to its condition; and the amount or the quality of ballast depends on the climatic conditions. As to the curvature, curvature always restricts speed, more or less, depending on the degree of curvature. It is pretty hard to make anything more than a general answer, I think, in that regard. (3566.)

We have had an ample supply of empty cars available on our lines in California to take care of the loading from Oregon east through the Oregon gateway. We had an ample supply in 1926, the year covered by Mr. Newell's study as to the traffic originating; we have had since, and I think we will continue to have, unless there should

be some radical change in transportation that would change the interchanges and change the situation around. As to the more southern gateways we are bringing more loaded house cars west than we are shipping east, as explained this morning, and that tends to make empty cars in California. Yes; I stated that the cars were available in California for this eastbound loading and did not need to be hauled west through Ogden, as Mr. Newell had hauled them.

Q. I have before me your testimony in Docket 14392, page 851, on which I find this statement: "It should be borne in mind in considering car shortage in Oregon that Oregon is very remote from the center of consumption and that it is the hardest country in
1969 America to get empties into." I am (3567) wondering if there is anything inconsistent with your testimony now when compared with that statement.

A. Well, I don't think so. That was rather a brief statement that apparently was not then understood. I would like to explain what I meant.

The distance across this continent is substantially the same, when taken from an eastern city like Chicago to Los Angeles or from Chicago to San Francisco, or Chicago to Portland, or Chicago to Seattle. Those distances, which are great, are substantially equal, and they fan out like my fingers. Now the cars come west over those routes, and whenever you have to get in on the lines connecting those primary routes you are getting further away from Chicago all the time.

Now it happens that between Roseville and Portland is the longest connecting north and south piece of track between the parallel east and west lines, and when you get up in the middle of that territory, half way between Roseville and Portland, you are further from Chicago by rail than you can get anywhere in the United States. You are further from New York. And when branches come off of that line, they are still further away. And that is what I had in mind in saying that it was the hardest place to get empties to, for the simple reason that it is the furthest territory from the center of consumption, and it is the furthest distance that empties have to go when brought west here to make up a (3568) deficiency in interchange to move this large volume of lumber east.

Any line that cuts across into this territory I have been describing and which I referred to in my testimony in the former case, like the cross-State line, on the one hand, and the Alturas line, on the other, will shorten the empty haul of cars that move from
1970 Granger, say, into that territory. It won't shorten the haul on empties for that territory that don't move that way, though.

Exam. ROGERS. Based on your testimony, before the cross-State line would serve this purpose in getting empties into Oregon, would you have to move those empties from some point west of Granger, or east of Granger, simply for the purpose of getting them into Oregon?

A. Yes. The cross-State line would not shorten the haul on empty cars to Oregon unless they came that way, and they would not shorten the haul of empty cars to Oregon, to Crescent (3569) Lake, more than about 200 miles over what the Alturas line would do if they come that way. Either line will very much shorten the present length of haul to, say, a point like Roseburg, if the empties were hauled from Ogden or Portland.

The situation is not that so long as there is an adequate supply of empty cars at hand in California, a short distance off, there won't be an empty car supply hauled from the east. The cars had better come from California to Oregon for loading than go east, rather than go back empty from California and then bring other empties out from the East to Oregon.

Assuming that there was an empty car supply at Portland, it would not be our policy to move them from Los Angeles or El Paso—not if Portland ran into surplus box cars; we would not haul them up from California. If empties were available at Ogden, we would haul them from Los Angeles or central California whenever we could economize in empty mileage. The distance, I figure, from Los Angeles to Crescent Lake is substantially the same as from Ogden to Crescent Lake via (3570) Alturas—about 881 miles from Los Angeles and 888 miles from Ogden, and the distance would be a standoff. El Paso is 814 miles from Los Angeles.

Q. Now at the time your company started the construction of the Modoc Northern the proposal and the proceeding for the construction of the cross-State line had been inaugurated and you were fully aware of the demands of the State of Oregon for
1971 a cross-State line, were you not?

A. I know that the matter had been before the Interstate Commerce Commission in a hearing, that the Oregon commission had sponsored such a line. (3571.)

H. D. MORTENSON was thereupon produced as a witness by defendants, and, having been duly sworn, testified as follows:

I reside in Klamath Falls. I appear here on behalf of the Klamath Falls Chamber of Commerce and other interests of the Klamath Basin. I am president of the Pelican Bay Lumber Company (3572), who are engaged in the manufacture of lumber and box shooks, and refined lumber manufacturing, to a certain extent. Its plant is located on the Upper Klamath Lake, about two miles north of Klamath Falls, Oregon. The capacity of the mill is around 90,000,000 a year; we expect the actual output this year to be 80,000,000. I think the cut of this mill is as large as other mills in the Klamath Basin. There are about 25 mills in that section, whose combined capacity is about 533,000,000 feet annually. They are all pine mills. A new mill coming in will add to the above capacity. These 533,000,000 feet are distributed 60 per cent into California and about 40 per cent (3573) goes east. Of that 40 per cent about 12 per cent goes north of Chicago, about 88 per cent goes either

east of Chicago or south of Chicago. Our mills are served by the Great Northern and the Southern Pacific.

I am familiar with the proposed cross-State line, and in offering testimony here I can speak not only for myself but the other
1972 pine manufacturers in my district with respect to transportation facilities. I have discussed this matter with them and I am confident that I know their general opinion. I did not ask for written authority to speak for them, but I told them I was coming here and told them for what purpose, and it was quite agreeable to them that I should do so. I talked with six or seven of the larger ones.

From the standpoint of marketing our manufactured product, the construction of the cross-State line is of no interest to me, because I don't feel any need of it at this time. We are well served by the lines that are there, and we don't see (3574) that there would be any advantage to us in the operation of our business to have any other facilities than those that have been provided and that are now under construction.

I have very much interest in the Alturas construction, which is being constructed by the Southern Pacific Company, the chief carrier serving our district.

Assuming the Alturas line completed, and assuming the cross-State line completed, our shipments going east would go over the Alturas line; but the small proportion that we send north goes over the Great Northern. There is a little movement that way.

The cross-State line would not open up to us and the other mills in our district any territories which are not open to us now or which will not be open to us when the Alturas line is finished. (3575.)

We route our own shipments. Occasionally we have requests to route shipments on the part of the customer. But on all of our sales we reserve the right to route the shipments. We, however, vary that. If there is no valid reason for us not to follow a customer's request, we sometimes follow his request.

Assuming that the distance from Klamath Falls by way of Alturas, and from Klamath Falls by way of Crane and Ontario
1973 is substantially the same, there would be no incentive on our part to divide the business between those two lines between the cross-State line and the Alturas line. I don't think it would be to the advantage of the business, as far as that is concerned.

I think that the carrier that actually serves the mill (3576) always gets the long haul.

Whether they get it or not makes a difference to us to this extent: That if the railroad is in daily contact with us, and their service is the same as another road that is foreign to us and with whom we are not well acquainted, why, naturally, there being no preference, we would rather do business with the people that we come in actual contact with.

In the shipment of lumber the element of time in transit is important if it is a matter of a long time, but a matter of a few days

is relatively unimportant. We hardly ever have the question of the saving in the shipments by the customer. We do often have requests, in certain seasons, for the lumber to be shipped quickly, and often we turn down orders that we cannot ship within certain days, but that is a matter of business arrangements. That is a matter of the facility of a manufacturer to make shipments. They may call for items that are out of stock, or something of that kind. But so far as the transportation is concerned (3577) we have no difficulty with respect to the time involved in transit. And our lumber orders almost on the whole do not require a matter of a very few days. We are always given leeway in promising shipments.

The time given for delivery of lumber depends upon the character of the lumber being shipped. Now we have a number of customers who rework our lumber, and we have standing orders with those people, and we make them shipments on specified times, whatever suits their convenience. To some of them we ship two cars a
1974 week, or one car a day, and so on. That is one class of customers. So long as we keep the flow of lumber reaching them so many days apart, that satisfies the situation. Then we have another class of customers, who are the retail yard men, and in placing their orders they generally want the goods shipped within 30 to 60 days. Sometimes they ask for 3 weeks. In times of stress some of them ask for quick shipment.

We do our own logging. (3578.) I both own timber and have it contracted in the Klamath Basin, that is, with the Forest Service and the Indian Service. Our log haul to the mill is about 40 miles over the Southern Pacific, and about 37 miles over our own railroad; about 77 miles or 78 miles. There are longer hauls than this being conducted in our district. I think the Shaw-Bertram Company haul probably 15 miles farther than we do.

I think there is a growing tendency in the lumber industry—at least there is in the Klamath district—to try and centralize the lumber industry at or near the city of Klamath Falls. It has numerous advantages, largely, I might say, three: One is that labor is better satisfied in a community center; it has better opportunities for enjoyment and better opportunities for their children and wives and families. I think you get a better class of labor nearer a fairly decent sized city.

And then all the sawmills, having offal, which science is now permitting us to use, and, by congregating mills in one community it makes it more profitable to work up the by-products. (3579.)

And thirdly, as far as the Klamath Falls is concerned, it has physical advantages that are better than the old type of mill located in the woods. We have large lakes there, water storage, good climate, and pretty cheap water power.

So those three are the major reasons for centralizing the business in Klamath Falls. In doing that, they are hauling the logs for
1975 greater distances, probably will reach out from 100 to 150

miles. I know of instances in Wisconsin where they are hauling logs 250 miles.

I think 40 or 50 per cent of the Klamath Basin timber is in Federal ownership. They operate on a selective cutting basis and leave the forests in protected condition, as far as fire is concerned, burn up all the brush and make it safe for the oncoming crop. And in logging they use appliances which do the least damage to the young growth. They don't permit the use of donkey engines and several other methods of logging which would be ruinous, or, at least, more damaging to the young crop than the big-wheel logging. This system of handling the forests with respect to furnishing a continuing traffic as distinguished from a flood of traffic that would come if it were depleted at once, very much prolongs the life of the forest, and there is less taken off to the acre. I know in some instances they leave from 5,000 to 7,000 and sometimes even 8,000 feet of timber that if it were in private hands would be taken off. So that it holds back part of the yield at this time and tends to perpetuate the yield. And I think that lumbermen, particularly down in that country and in the redwoods, and other sections, are falling in with that tendency of reproduction on their own part.

I am familiar with the timber belt between Bend and Klamath Falls that extends for some miles west of the Natron cut-off or Cascade line in the direction of the Fort Rock country, where the long belt is there between that line, between Klamath Falls and Bend, after you leave the main line at Chemult. They are logging into that timber from Bend (3581) and also from Klamath Falls.

Q. Just approximately what distance is there in the gap between the two encroachments?

A. Now do you mean as to actual operation, or timber
1976 holdings? There are two large companies up at Bend whose timber holdings come very far south, and that ultimately will be operated in Bend.

Q. How near that property line have they approached from Klamath Falls?

A. Well, they are within—at one point of their holdings they are within about 10 miles, but the body of their timber I would say is probably separated maybe 30.

Q. Would you say that ultimately that timber belt will be hauled either into the Klamath mills or the Bend mills?

A. I think it will go either one way or the other; yes, sir. Probably both ways. It is going both ways now.

We have been urging the construction of the Alturas line for years.

I haven't heard of any sentiment in our community, speaking from the public standpoint, for the construction of this cross-State line. (3582.) I think the general attitude is the construction of that just at this time is perhaps premature.

Cross-examination:

My residence is at Klamath Falls, and I also maintain a residence at San Francisco. For the purpose of voting my legal residence is Klamath Falls; but I reside part of the time in San Francisco.

I have not looked into the extent of our use of the new line of the Great Northern into Klamath Falls for our lumber shipments. I leave those things pretty largely to our sales manager. But I don't think there is very extensive movement over that line.

I don't think we have developed any markets at all along the Northern line since the Great Northern entered Klamath Falls. (3583.)

1977 I don't know what percentage of our total shipments actually move over the Great Northern as compared with the Southern Pacific, except that I know they are very small.

I appeared in one of the previous hearings in the Klamath Basin cases, where the Northern lines were applying for permission to extend their lines into Klamath Falls, and at that time was a witness for the Southern Pacific in opposition to the petition of the Northern lines. I still fail to see any advantage in this proposed line at the present time, when we have not yet even completed a similar line going east, the Alturas line. I believe that that will perform all the facilities that we need until time demonstrates that I am in error. I am interested in the Alturas line. (3584.) What I am interested in is a connection which will give us better freight rates, and I believe that the completion of this line will give us better freight rates and cheaper movement of lumber east. I believe that when this railroad matter is all settled they will have to give us the Bend rate; that is, be on a parity with Bend, Oregon.

Q. Then the only advantage that you conceive from the standpoint of the Klamath Falls lumbermen is that you may get a lower rate to the East on your lumber?

A. It will not improve our facilities of handling, as far as time is concerned, to any appreciable amount, which is not as much of an interest to us as a matter of rates.

If the construction of the Alturas line does not result in reducing our rates, there will be no particular benefit to the lumber business, because we already have the north and south line to carry our lumber. But I do believe that it will be of immense interest or benefit to the farmers and general community in moving their stuff. (3585.)

1978 The Alturas line has been contemplated for some time, and, as I understand, was held up on account of the death of Mr. Harriman and the unmerging of the Central Pacific and the Union Pacific, and so forth. But we have been actually urging the construction of it ever since those matters were settled. I am not positive as to whether it has been contemplated any longer than the cross-State line from Crane to Crescent. The first time that I heard of this railroad is when I came into that country in 1910.

We have been shipping lumber into the markets of the Middle West since 1912; that is 16 years. Our trade there has been constantly growing, but we have been (3586) in those markets for 16 years. In our particular mill, I think the percentage of shipments is a little heavier east than the general percentage of shipments from the Klamath district, because we refine our lumber a little more and we go after the eastern business a little more. So I would say 50 per cent of our lumber goes east, and probably 50 per cent goes to California.

Q. Well, what shipments, or what companies were you referring to when you said 60 per cent goes into California and 40 per cent east?

A. I was speaking of the region in general. There are some concerns there that ship 75 to 80 per cent of their lumber east. I speak of those concerns who manufacture largely boxes, food containers.

Mr. DEY. You mean California?

A. California, yes.

The Klamath manufacturers ship a greater percentage of their output to California markets than the western Oregon lumbermen do. (3587.) The western Oregon lumbermen are closer to the Middle West and East, and they have built up their trade and business probably along that line. The western Oregon lumbermen manufacture quite a number of boxes, but I don't think to the same extent that the pine of the Klamath district is used. I think they put out more in common boards in proportion to shook than the Klamath Falls mills do.

The lumber yards and brokers in the East in recent years carry smaller stocks on hand and depend to a greater extent on
1979 prompt delivery. They don't carry as much lumber as they used to carry, and they order lumber from the mill, which, perhaps, unfortunately requires the manufacturer to invest considerably more in lumber on hand in order to take care of his trade (3588) and also in dry kilning facilities, so that he may prepare that lumber for the trade. But we overcome that somewhat in an analysis of our product, so that over a period of years, or months, rather, we can figure about the percentage of different grades we are going to get from our logs, and, therefore, can more or less shape our sales to fit what we know we are going to produce and have ready at a given time.

Q. To the extent that you say the practice has changed in the buying of lumber, then, the matter of time in transit is more important now than it was a few years ago?

A. Well, if it is, it is a question pretty largely of management, that sort of thing. If a person is going to wait until he wants lumber and then order it, why, that is one matter, but if he is going to manage his business and order with reasonable dispatch, why, it does not affect the proposition.

Q. But you would expect to get some benefit from the saving in distance via the Alturas line in connection with shipments demanding prompt delivery?

A. I don't think that difference would make any difference at all in the case of lumber. (3589.)

Q. (By Mr. McCULLOCH.) Mr. Mortenson, do you know about how long it takes your lumber, on the average, to get to Chicago from Klamath Falls?

A. Only generally. I have heard that under present movements it is 13 to 15 days. I am not prepared to answer how long it takes to get to New York. I don't follow the details that closely.

The Klamath people urged the construction of the Alturas
1980 line because it opened up quite a country; it was a direct route East; it would haul some of their livestock East; it opened up the Merrill Valley and quite a large section of country there, and made Klamath Falls a diverting point for traffic, passenger traffic, and one thing and another, going East. It was decidedly in pretty near every particular to their advantage. (3590.)

I understood when you spoke of the Klamath people you were referring to others than the lumbermen of the Klamath section. The lumbermen are chiefly interested in the building of the Klamath Falls line as a means of getting reduced freight rates to the East. And the other people are interested in the quicker route, better outlets to markets, and general development they thought would take place in the territory traversed by the Alturas line if it were built. They were generally interested in having the country opened up and a new railroad with a direct connection east, and a diversion of passenger traffic through the town.

I think the rank and file of the people in Klamath County were probably glad to have the Great Northern built, just because they wanted another railroad. (3591.)

Our mill has access to the Great Northern so that we can ship over it if we wish. We have shipped over it some. The Great Northern is certainly not a detriment, but I could ship my lumber just as well over the Southern Pacific. As a lumberman, everything else being equal, I would prefer to be located at a point where our mill would have the service of two railroads rather than one to eastern markets. (3592.)

If a cross-State line were built, to route our shipments east over that line, I don't think it would make any difference whatsoever to the lumbermen of the Klamath Basin, to have the opportunity of having one more competitive route to the East.

1981 Exam. ROGERS. Didn't you say, Mr. Witness, that you appeared in opposition to the Great Northern extension, in the Klamath Basin case?

A. Yes.

Exam. ROGERS. Have you changed your mind?

A. No, sir.

I said I had used it to a small extent, Mr. Examiner. And, furthermore, I said that, everything being equal, nothing else at stake, that I thought two railroads were probably better than one. But I still think that the development in Klamath County has been and is and will be handled satisfactorily from our point of view, with the completion of the Natron cut-off and the Alturas line.

Mr. DEY. You say you appeared in opposition to the Great Northern entry; you appeared at the same time in support of the Alturas line, did you not? (3593.)

A. Yes. That was all tied in together.

Mr. DEY. And in support of the acquisition of the N. C. O. and the O. C. & E., all of which dockets were heard together?

A. Yes. They had a rail movement on there that was called the Main Line East Association. That was to express the desire of the people of Klamath for this Alturas line, and I believe that that association was joined by some 400 farmers and people down there to express their views as to the desirability of the Alturas line, and that whole question was involved in the case. (3594.)

Since the Great Northern has extended to Klamath Falls, there has been no appreciable movement of lumber or box shooks from the mills at Bend into California. There was none hitherto.

Q. Are the Bend mills in a position now to compete in California markets in shipping pine lumber and box shooks into California with the lumber mills of the Klamath Basin?

A. Well, they have a connection there. It is possible for them to ship that way. They have a higher rate from Bend to
1982 California points than they have from Klamath.

Q. On shipments to Chicago and to points east of Chicago is there any advantage in distance or time or service after the Alturas route is constructed in shipping via that route than Ogden east or in shipping via the Great Northern and through Spokane and east to Chicago and points east of Chicago? One (3595) route would be substantially as desirable as the other from Klamath Falls, wouldn't it to Chicago and points east, either the route north or the route south?

A. Well, I think that the route south reaches to more territory The route north goes up through a long haul that is unnecessary.

Q. I am talking to destinations Chicago and east. Would there be any advantage in shipping to Chicago or a point east of Chicago, to ship via Alturas rather than via Bend and the Northern route, from your standpoint as a lumberman, in time of delivery or in point of service?

A. It might be possible in point of service. We are right on the main line of the Southern Pacific, and we have better facilities there for cars and getting them out towards their destination than we have going north.

Q. What do you mean by better facilities in the matter of cars? Are you getting a better supply of cars for shipments of your lum-

ber since the Great Northern operated into Klamath Falls than you did before?

A. No; we haven't had a car shortage for some period of time in Klamath.

Q. Do you think the Great Northern's service into Klamath Falls is of any benefit to you in the matter of obtaining car supply?

A. No; I said that we had always been supplied with cars (3596) from the Southern Pacific.

from the Southern Pacific.

1983 Redirect examination:

Our mill is now served by the industry tracks of both the Southern Pacific Company and the Great Northern railroads. I know that the proposed cross-State line will, on its way to Crescent Lake, cross the Great Northern and cross the Southern Pacific tracks.

Q. In central Oregon—a connection with the Southern Pacific at Crescent Lake, and crosses the Great Northern 20 miles to the east. Would you concern yourself, in the routing of lumber from your mill, to route any of that lumber to the cross-State line off of the Great Northern if you shipped it on the Great Northern, or off of the Southern Pacific if you shipped it on the Southern Pacific?

A. No; I wouldn't. I am pretty largely interested in the delivering road, and, as I said a moment ago, the road that serves our industry, whether it be one or two, would by choice get probably the long haul. We certainly wouldn't want to send it up part way on their road 40 or 50 miles and just deliberately, with no reason, divert it to some other (3597) road.

In other words, we don't want any irritation and controversy with the local officers and agents with whom we are doing business daily, if we are served adequately. And that is the situation in my experience and observation, with respect to other industries served by trackage in our community and other communities. The local line has all the advantage.

1984 W. C. DALTON was thereupon produced as a witness by defendants, and, having been first duly sworn, testified as follows:

Direct examination:

I live in Modoc County, California, (3598) over the Oregon line. I have interests in a ranch, a half part of which is in Klamath County, Oregon, besides other interests. Practically all of the business is done there.

I am president of the American National Bank of Klamath Falls. I own around 5,000 acres in the Klamath Basin, on both sides of the State line. That includes about some 3,500 acres that is irrigated, and the other is above the irrigation system. I have range lands besides that, but they are more in California. My holdings there are about 14,000 acres. I have about 3,000 cattle; no sheep. (3599.) The ranches produce about 1,200 tons of alfalfa. I am pretty much

interested in that part of the country; I should be—I have been there long enough. I should be familiar with the farming and stock raising conditions in that county.

In that district I produce about 1,000 carloads of potatoes, and sell them wherever we can find a market for them. Over 90 per cent of them will go South. We have had some trouble finding a market for potatoes last year and this. This year we are just opening up; it don't look any too good. We could raise more of them if we had a market for them. (3600.) The potato industry there has increased 95 per cent in five years. We could easily double our production if there was a market for them.

I think about 60,000 tons of alfalfa hay is raised down in that country. We have been feeding it locally because we had no railroad transportation to wherever we could find the market.
1985 That would be in the Willamette Valley or in California.
California bought some hay in there last year, but when they were buying this hay the wet weather came on and the roads were closed and we couldn't get it to the railroad, and it is still sitting there. They raise alfalfa about 25 miles out from Klamath Falls. They raise other hays, but the alfalfa they ship. The hay up through the valley there where it is thickly settled they don't have that amount to ship that they do down south of (3601) Merrill and west of Malin. They could haul it in with the truck on the highway, but out where that hay was raised they have no highway, up in that new settled country.

Exam. ROGERS. How come you up here?

A. The Klamath County Chamber of Commerce notified me that they wanted a representative here.

Exam. ROGERS. What interest has Klamath County in this case?

A. Well, I don't know as they have got any, any more than the Klamath County Chamber of Commerce, I think, done all that they could to encourage the construction of the Modoc Northern Railroad, and I don't feel as if they have got any objections whatever to the building of a cross-State road so long as it doesn't interfere with the tonnage that the Modoc Northern is entitled to.

Comr. MCMANAMY. What do you mean, "entitled to"?

A. Well, they have been granted a permit to build the road, and it is actually under construction. I think that the freight along the line of the Modoc Northern they are entitled to.

By the Modoc Northern, I mean the line from Klamath Falls to Alturas. (3602.) I think that freight along that road they are entitled to, until you at least get your bearing. Freight originating on this Modoc Northern goes right through this Modoc country.

Exam. ROGERS. Were they afraid some of that freight was going to move up this way and over the cross-State line?

A. I don't know. I believe that—now, as I understand it,
1986 in laying a base to show that there was sufficient tonnage to warrant the construction of a cross-State road I think they name the tonnage in that basin.

Exam. ROGERS. Well, was it your understanding that the parties in this case were depending on that tonnage for the cross-State road?

A. I am not positive of that, but I think they claim that tonnage in the Klamath Basin as tonnage available for the cross-State line. That is the reason I am here.

The Klamath Basin has sold some hay in the Willamette Valley. (3603.)

Q. Could it produce more if the market were there for it?

A. Well, you see, we are under Government irrigation. They have reclaimed there a lake of 92,000 acres, which will be available for homesteads, about half of it, and the only reason that there isn't more of that land settled today is the fact that they had no transportation; the Government is afraid to throw it open and get the people in there with a lot of tonnage that they couldn't dispose of. This lake of 92,000 acres is called Tule Lake. Perhaps 50 per cent of that will be homesteaded, and this road runs right through that Tule Lake country.

With the construction of the Alturas line, according to my judgment, there should be a very large additional production of alfalfa and potatoes, which are two crops that can be raised down there satisfactorily. (3604.)

The live stock in the Klamath country consists of cattle, sheep, some hogs, and the dairy industry developing. I think there will be room for considerable expansion in dairying. The dairying interests find an outlet for their product almost entirely in Oakland, California.

1987 There isn't a great deal of beef cattle left in the country. Shipped from the Klamath country, I think there would be 500 carloads. Ninety per cent of that will go south, to San Francisco and Oakland. There are about 130,000 sheep raised in there. (3605.) They ship a great many lambs out of there, which go mostly to the San Francisco market. This industry is developing.

Q. As a matter of fact, the vast acreage that you have got under water there and that isn't occupied, running into thousands of acres, gives room for development of every one of these projects we have been talking about in very large amount, doesn't it?

A. That is the main reason we wanted this line built.

Comr. MCMANAMY. Do you understand that this proceeding has anything whatever to do with the construction of the Alturas line?

A. Well, I have been led to believe that it has.

Comr. MCMANAMY. Where did you get that information?

A. From Southern Pacific officials.

Exam. ROGERS. What did they tell you, Mr. Dalton?

A. Well, they didn't think that there would be freight sufficient to warrant the construction of both lines at the present time.

Exam. ROGERS. Who was that told you that?

A. Paul Shoup. (3606.)

Exam. ROGERS. When did he tell you that?

A. Well, I think on different occasions. Not later than last May. This line has been in contemplation—the first survey of this road, I think, was made in 1910.

I am here just to present Klamath views of the situation as we see it.

Exam. ROGERS. That is, to keep the Southern Pacific from quitting the Alturas line?

1988 A. Oh, I don't think they are going to quit it, but I say in so much as we have used all the influence we have to encourage the construction we would like to see them get the tonnage they are entitled to. Not off of anybody's line; off from the country along the lines of road they are developing.

No one told me that the Alturas line would be dropped if the cross-State line was built. I have no fear along that line. (3607.) I have been given to understand that it is the judgment of some people that there isn't any justification for both of these lines.

The lamb marke is mostly all south. Some go to Los Angeles, but most of them to San Francisco. Ocassionally some to Portland.

In that district, besides alfalfa and potatoes they raise grain—wheat. The wheat mostly comes to Portland—I think maybe 300,000 bushels, probably, exported from there last year. The wheat, I think, was mostly exported from here and was shipped to Portland. It wasn't purchased in the Willamette Valley. (3608.) I raise grain myself. Our grain we sold to the local millers there, and it was put through—I think nearly all of it was shipped to Portland. (3609.)

Q. Have the people down there generally any interest in the construction of this cross-State line, so far as their particular interests are concerned?

A. Take that particular locality, I don't think that they are particularly interested in it, but I don't think they have got any objections to the road if the commission thinks it should be built and that there is sufficient tonnage to warrant its construction.

The people don't want the Alturas line, which they consider their line, stripped in order to support some other line; I think that is the way they have got it.

1989 The mills in Klamath Falls might ship some mill feed or mixed feed to Willamette Valley points, but they make a mixed feed there. I am not familiar with that. They sell some locally.

I have never been in the sheep business down there at all. (3610.) A good many customers in my bank are in that business. This is an important enterprise in the Klamath Basin. They raise and handle or feed about 130,000 sheep in there. 90 per cent of the lambs will go to California. Only a few lambs for breeding purposes is all I know of that will go east.

Q. Now, if the county agent should come in there and tell you that they were going to ship 44 or 45 cars a year of lambs east, what would be your opinion on that?

A. They might ship them for breeding purposes. They might ship via the cross-State line every year; I don't know.

44 cars would be about 90 for single deck and 180 for double deck. (3611.) If they were shipping these cars east, and if the Alturas line and the cross-State line were both built, I guess they could ship either way. From where I am I would probably ship via Alturas, because we are south of Klamath, would be right on that line.

Q. Well, is there any local interest there so that they prefer the Alturas line to the other—that is what I am trying to develop—particularly if the other was operated by another railroad that didn't serve Klamath Falls?

A. Well, we certainly wouldn't as far as the railroads were concerned. The Southern Pacific lines are so laid out that it is developing that country, and that is the reason that we are interested in it. The agricultural land and the stock industry is south of Klamath Falls, south and east.

Q. Well, does that involve crossing the Southern Pacific tracks or facilities to get to point of shipment? They would have to ship on the Southern Pacific or the Great Northern anyway, wouldn't they?

1990 A. The only railroads in there.

Q. Yes. Well, is there any reason that you can think of that would induce the shippers there to route it via the cross-State line, over the Union Pacific Railroad, or the system, or the O.-W. R. & N. unit of it?

A. None that I know of. (3612.)

The sheep winter in the southern part of Klamath County, and in the summer in the northern part. The season is starting to ship lambs right now. In the shipping season there would be a considerable number of sheep in the upper part of Klamath County; ship from Chiloquin. They are shipping from Chiloquin now. This is south of Crescent Lake; I don't know just what the distance is, but it must be a hundred miles. The sheep graze in that vicinity; just pasture; they have wonderful summer pasture over there. The sheep range up in around Chiloquin (3613) north and east. They both drive them and ship them up there; they do both, but this last spring there was some sheep shipped from Midland to Lenz.

I don't think they have grazing-in-transit privileges to ship them up there and ship them back. They might have some special rate on those sheep shipping up there for that purpose, but I think it was a one-way shipment. I think the big part of their wool is shipped to Portland.

Cross-examination:

Q. (By Mr. ELLIS.) Would you anticipate a movement between Harney Valley and Crescent or Chiloquin similar to the one you have described from Chiloquin south into your section of the country

and back to Chiloquin of sheep? That is, for advantages of feed in the different seasons of the year? (3614.)

1991 A. There might be some.

Q. As a practical stock raising problem, it is the general practice to winter the sheep where there is hay available, and then ship them out onto the range for the summer and ship them back in again to the hay supply?

A. That is done.

Our section of Klamath County has had no large surplus of alfalfa hay available at railroad shipping stations. We have quite a lot of hay available, but it hasn't been on a railroad—25 miles away. It is impracticable to haul alfalfa hay for distances of 25 miles to get it to the railroad unless you have a highway. At times of the year you might haul it, but last year it rained down in that country in the bed of that lake and you couldn't haul out of there. The result is the hay is still sitting there. (3615.)

I think some alfalfa has been shipped into western Oregon. I am not familiar with that. But this hay that I speak of was going to Modesto, California.

The Modoc Northern as surveyed misses the home ranch about seven miles; but it would be within convenient reach of my ranch. It is my thought, undoubtedly, that that will aid in the development of my land. It will be a big factor in cutting it up and selling it off. When we were raising cattle we could drive them to market, but when you get to colonizing it is a different proposition. We can colonize this land now to some extent without the Modoc Northern; but if it takes an average of 25 cents a hundred to get your products to a railroad, it is taking the lion's share of the profit. (3616.)

I lay a great deal of the large increase of 900 per cent in the production of potatoes in Klamath County in the last five years to our county agent. We never raised a great many potatoes and didn't know what a potato country we had until we got

1992 started. Take it three or four years back, potatoes were a good price; we made a lot of money out of them. I think 90 per cent of the market will go to San Francisco, or south.

Exam. ROGERS. But I had understood that these county agents were pretty nice young boys, but they didn't know much. What do you know about it?

A. Well, ours is different. We swear by him.

Q. (By Mr. ELLIS.) Your conclusion, then, on this railroad construction matter is that your production is largely a matter of markets, and you need the railroads to reach the markets?

A. I think that is the case. (3617.)

Q. (By Mr. MCCULLOCH.) Mr. Dalton, is the livestock industry important in Klamath County?

A. Oh, yes. Livestock moves principally to San Francisco.

Q. Any of it come north to Portland and then on to Puget Sound markets?

A. Oh, they have—when they feed cattle. Now, sometimes we feed in Klamath County, and some of them feed out, until towards spring grass cattle begins to develop south, and we find a market north for it.

I think just a little over 20 miles of the Modoc Northern will lie in Oregon before it passes into California, from Klamath. The rest of the line, to Alturas, will be in Modoc County, California.

Livestock is a growing industry in Modoc County, California.

Q. Will the construction and operation of this Alturas line, in your judgment, be of substantial benefit to the livestock industry of Modoc County?

A. Why, Modoc County is served by the Southern Pacific now, and it practically covers the stock growing section, the present
1993 road, N. C. O. No doubt it will help, but they could ship this way if the—— (3618.)

If the N. C. O. were not built and this was the first time that a railroad was projected and built into Modoc County, in my judgment the building of such a line we know would stimulate and benefit the livestock industry of the county.

I think that a new railroad in any country that is devoted principally to the production of livestock, where there is no railroad and never has been a railroad before, is bound to be of substantial benefit and stimulus to the livestock industry of that territory. You must remember that we have got to have feed to run livestock. Wherever you have got feed sufficient to run, of course you need the railroad, no question about that. You can't raise cattle without feed and water. If you have feed and water sufficient to run stock, you need a railroad.

Redirect examination:

Q. (By Mr. DEY.) Well, then, a country that hasn't got feed and water, a railroad doesn't help much, does it?

A. Not a durn bit.

Q. Now, you say this railroad, the Alturas line, is going to run near your land—it doesn't run where you want it, does it? (3619.)

A. No; it is going to miss us about 8 miles, the way I would like to have seen it went.

Q. You have been doing all you could to try to get the company to build it in a different location from what it was going to build it, haven't you?

A. I never did try to build a railroad. (3620.)

[File endorsement omitted.]

1994 PORTLAND, OREGON, *August 23, 1928.*

HAL F. WIGGINS was thereupon recalled as a witness, and, having previously been duly sworn, testified as follows:

Direct examination:

I have prepared some additional exhibits summarizing the revenues and tonnages which have previously been testified to in this

case. There are three exhibits embraced therein. These are the exhibits that I have before me. With respect to what sources I compile the summaries from, which I have prepared:

The first, consisting of three pages, is the statement showing the estimated tonnage and revenues from the ten southwestern counties via proposed cross-State line, based upon the Idaho exhibits and testimony.

I have explained heretofore substantially the method of rating and computation involved in this, and assumed that it (3621) was ready to be offered as an exhibit.

I have applied the rates to the total western Idaho traffic. This is the westbound traffic based on the first and fifth year estimates as previously in the record, and I have, as in Exhibit 28, taken the tonnage from that territory, using Boise as typical of origin and San Francisco and Los Angeles as typical of California markets, and laid the current tariff rates at the mileages via the proposed cross-State line, figuring the allocation to the cross-State sec-
1995 tor in the same manner as the revenues were figured and calculated in Exhibit 28. I have abbreviated the exhibit in form for convenience, but the calculations as previously explained at the time of introducing Exhibit 28 are identical with those used in Exhibit 28. (3622.)

(Said statement was thereupon received in evidence, marked "Complainant's Exhibit 104, Witness Wiggins.")

The second exhibit is the estimated tonnage and revenues for the cross-State line by years according to traffic groups or blocks, as indicated in the subheadings underneath the group numbers.

The first is Oregon traffic created, being the totals brought forward or recapped from Exhibit 28, which was the blanket exhibit showing complete details as to how the figures were determined.

Group II represents the San Francisco and vicinity or California traffic through Oregon points east of Crane, and is based on the Newton exhibits introduced for the Idaho commission.

Group III consists of Alkali outbound.

Group IV, Alkali tonnage inbound.

Group V is inbound tonnage to cross-State line.

1996 Group VI, Idaho traffic westbound, as just indicated in Exhibit No. 104.

And Group VII, Idaho traffic eastbound. (3623.)

In Group V, which is inbound tonnage to cross-State, which is starred, I have taken as the basis Mr. Lounsbury's Exhibit 75 in I. C. C. Docket 14392, being the tonnages and revenues shown in that exhibit, except for the interpolation between years 1 and 5. The tons are identical and the mileage the same relationship as the cars to the totals shown in this exhibit.

As to my estimate in Groups III and IV relating to Alkali Lake, I have taken Mr. H. L. Emerson's testimony as the basis for the outbound tonnage, namely, 50 tons per day for the 300 working days

in the year. I took 50 tons per day because that is the minimum output estimated on the basis of the unit which Mr. Emerson said was proposed to go in there with transportation. I mean that was the minimum operation—the smallest operation that has ever been considered in connection with the plant. The unit proposed at the time of Docket 14392. As a matter of fact, his subsequent testimony indicates that it would be considerably larger—I take it, very much so. (3624.)

I took that Group V from Mr. Lounsbury's study in the previous case because it consists of a large block of detail traffic for miscellaneous tonnages, light, a most tedious compilation, and I also felt that—regarded it as a minimum to the line.

Exam. ROGERS. Well, don't we have an exhibit now that is not based on this record?

Mr. SPENCER. In a record that involved Lakeview, Klamath Falls, Burns, and Bend.

A. No; I beg your pardon——

Mr. SPENCER. Well, that was involved in that case, now, Mr. Wiggins.

1997 A. That is very true, Mr. Spencer, the entire record was, but I only took the allocations to the so-called cross-State sector, and it is so segregated.

Mr. SPENCER. Included traffic originating in those points. The petition in that case petitioned the construction from Lakeview to Bend——

A. It took traffic inbound. It is inbound only, and it is allocated to that sector.

Exam. ROGERS. My point, Mr. Wiggins, is, as it is now we cannot tell on what this is based. There is no foundation for it at all in this record.

A. Well, so far as that is concerned, I might say that in checking it over I could substitute these figures as my own minimum estimate, so far as—I would regard it as a minimum, and I have checked it over very carefully and regard it as a minimum estimate of that miscellaneous tonnage of that character that would allocate inbound to that sector of the road. It isn't mixed with any other proposal at all. It is allocated specifically.

Group VII, I might say, is based on the Newton exhibits of the Idaho commission.

Mr. DEY. VI and VII both, those groups?

A. No; sir. Group VI is based on Exhibit 104, which carries a detailed compilation.

Mr. ELLIS. I will ask that this statement entitled "Recapitulation, Estimated Tonnage and Revenues, Cross-State Traffic, Groups by years," be received and marked the next exhibit number.

Comr. MCMANAMY. It may be received and marked Exhibit 105.

(Said statement was thereupon received in evidence, marked (3626) "Complainant's Exhibit No. 105, Witness Wiggins."

1998 My next exhibit is estimated tonnage and revenues, cross-State, on basis of diverted traffic to cross-State line, that is, traffic shown in Exhibit No. 26, and rated—that being traffic moving via the Ogden gateway, against which I have laid tariff rates and distances shown in column 7, computing the total revenue as revenues as shown in column 9, and making a straight mileage prorate allocation as shown in column 11. It is summarized by traffic groups on the lower half of the second page, the designations of the particular traffic being shown in the left-hand column, column 1.

It summarizes accounts for 30,628 cars, of 916,720 tons, showing a total gross revenue of $15,568,029.85, and on basis of straight mileage prorate allocation to the proposed cross-State line allocates $1,147,081.82, on the basis of the first year.

In the case of the last entry on the second page, "Lumber, Bend to East," showing 3,410 cars, which as explained is already accounted for in the record, there is an error as to the point or calculation by which 10,230 tons is changed to read (3627) 102,300; the total ton-miles, 291,248,100 in lieu of 29,124,810; and the total revenue, $1,575,420.00 instead of $157,542.00; and the allocated revenue to the cross-State sector of 168.5 miles between cross-trunk junction and Crane is $93,264.86 instead of $9,326.49.

The totals are corrected to correspond. (3628.)

The last figure in column 11 is the earnings claimed for the cross-State line, taking the western Oregon traffic and applying a straight mileage prorate to it, and as indicated in a note on that page it represents this mileage allocation as against the 189 miles
1999 cross-State, or the 168.5 miles, as the case may be, against the rather long mileages of column 7, and is straight mileage prorate only. In other words, it isn't the revenues claimed for the cross-State road, but it is necessary to go to Exhibit No. 16 for those revenues. I think the note at the bottom of the page explains that, however, and gives reference to the proper exhibit. This statement I have just discussed covers the first year traffic, as indicated in the lower left-hand portion of the page. The heading on the first page is in error to the extent that it says, "First, second, third, fourth, and fifth years." Rather, it expresses the intention, but not the performance, as it was my purpose in the time permitting to (3629) compute the second, third, fourth, and fifth from the basis used here. I have not so computed it for the remaining years. I had it computed, but instructions for the machine work failed me, and it would be necessary to complete that if you desire. I have made it approximately, but I would want to revise the fourth year figures before submitting it as a whole. I do not have the total figures corrected at this time available on the remaining years. I can readily make the corrections and offer it in supplemental form.

Mr. ELLIS. I will ask that this statement just identified and described be received and marked Exhibit 106.

Comr. MCMANAMY. It may be received.

(Said statement was thereupon received in evidence, marked "Complainant's Exhibit No. 106, Witness Wiggins.")

I do not think I have any further explanation to make of my exhibits.

Exam. ROGERS. Mr. Wiggins, let me see if I understand this. As I get it, now, take the first year's traffic, the traffic originating and destined to the cross-State line (3630), your revenues are $65,745.00?

2000 Mr. DEY. Where is that?

A. Pardon me, if I may get that. Exhibit 104, and page——

Exam. ROGERS. Three.

A. —three.

Exam. ROGERS. No; it is on Exhibit 105.

A. Exhibit 105, and——

Exam. ROGERS. That is the Idaho traffic, isn't it?

A. Exhibit 105 embraces several different blocks of traffic, as indicated in the subheadings.

Mr. DEY. 104 is the Idaho traffic.

A. Well, 104 is Idaho westbound only. Idaho eastbound is found in Group VII of Exhibit 105.

Exam. ROGERS. I see that I am in error.

Cross-examination:

Referring to Exhibit 104, I have used Boise as a typical point of origin in the southwestern counties of Idaho. (3631.) The first item, "Commodity, grain," destined San Francisco. The rate of 56½ cents a hundred pounds, I believe that is the Boise rate to San Francisco via the existing route. I am not certain whether it is Wells or Ogden, but probably the Ogden route. Existing rates by existing mileages, I will say, even though the mileage used in column 11 is admittedly the cross-State mileage. My plan is to take that grain from Boise, for instance, destined to San Francisco, if there is any, route it over the cross-State line and turn it over to the Southern Pacific at Crescent Lake, instead of turning it over to them at Wells or Ogden. I am merely rating the tonnages which have already been supported via that route. The tonnages supported, so-called, those are taken from the Idaho exhibits and testimony.

2001 Q. Which exhibits?

A. Well, I will have to——

Q. Newton, or Madden, or——

A. No, their agricultural estimates. I believe that Mr. Madden's (3632) exhibit was one of them, and I think that—I can't identify all those exhibits, but they are taken from the tonnages used in the Idaho exhibit.

Q. Well, were they taken from more than one exhibit, or from several exhibits, and added up?

A. No; they were totaled in the form that I have them, and they are identical with them. In fact, they are my basis for using any tonnages; they are the basis for using all of the tonnages that are shown, taken from those exhibits.

Q. Don't you know what exhibits those are from? You talked with those witnesses before they went on the stand and discussed the matter with them.

A. It is introduced. I can get the number, but——

Q. I don't care about the number—the witness.

A. Well, I will have to refer to it to get the witness.

Q. I see.

A. I haven't heard all the testimony and couldn't follow them in that way.

Q. I would like to know——

Comr. McManamy. Will you get that information for Mr. Spencer later?

A. Yes, sir.

Mr. Ellis. Do you recall whether——

Comr. McManamy. Or do you wish it now, Mr. Spencer?

Mr. Spencer. Well, just so I can get it before the witness——

Mr. Ellis. Do you recall whether it was Mr. Madden's or (3633) Mr. Spangler's exhibits?

2002 A. Well, I believe, since you mention it, that Mr. Spangler was the witness. Mr. Spangler's exhibit was the basis, as I recall now. I know there were several witnesses, and I didn't attempt to keep those witnesses and exhibits and numbers straight. I took the figures from the exhibit. I might say that I have included Los Angeles there, as explained in previous exhibits, that the longest mileages might reflect. It is very true that they jerked down the ton mile average, and all of that, but I consider it ultra conservative in using it that way.

Mr. Spencer. Even though the distance is shorter via Salt Lake, you want to massacre the originating line. What advantage is there to a shipper to take that business away from the Union Pacific system line and put it over the cross-State line and the Southern Pacific by a longer route?

A. Well, it is a Southern Pacific-Union Pacific joint haul via the shortest route that you could claim now, anyway. It is the same proposition. If it goes——

Q. To Los Angeles?

A. If it goes—Well, Rogerson-Wells routing——

Q. I was asking you Los Angeles. You were talking about Los Angeles.

A. True, and I consider that some of these commodities would go that way for purposes of alternate marketing. I think it has been testified to. At any rate, the only significance of the Los Angeles mileage is to include the long mileage and not allocate a greater percentage of it to San Francisco, where I believe the testimony supports that it would go. (3635.)

Q. Why, if you thought some of it was going to be routed over that cross-State line for marketing considerations, why did you give it all to that line?

A. Why didn't I?

2003 Q. And leave the Los Angeles line of the Union Pacific stripped?

A. I used this on a fifty-fifty basis, as the figures indicate, in order to be conservative as to mileage, and hence the ton-mile rate.

Q. Your fifth-fifty division is between Los Angeles and San Francisco, all going via the cross-State line, isn't it? You don't leave fifty for the Los Angeles route, do you, and the Union Pacific?

A. No; I figure the mileage via the cross-State.

Q. Just take it all?

A. Of this allocation that goes California via cross-State, yes.

The routing has been vouched for. I am not setting up the routing.

I split the tonnage fifty-fifty, it being designated that it would go across State to California markets. I am moving hay to California and dividing it fifty-fifty as between the California markets, for the sake, as I say, of taking in the longer mileage to Los Angeles.

Q. I asked you if you were moving hay 1,254 miles by this exhibit (3636) to Los Angeles?

A. I have so figured it.

There are exhibits in evidence that make such proposal; all that is in here is, as I say, taken from evidence already in. I am not arbitrarily designating—I am not designating the market; I am taking what is found—I am not designating the destination; I am taking the destination that has been given. I have heard of hay shipped from Oregon here to the Atlantic seaboard, and from Yakima there, in some instances by water. I don't know how much went by rail. We have a charge against that hay to Los Angeles of 70½ cents a hundred pounds. That would be roughly $14.10 a ton.

2004 Q. For transportation alone; and you have got a baling charge of $3.00 to $3.50 a ton, $17.60 a ton for the baling charge and the transportation. Are you representing that that is a practical movement or would move?

A. I haven't considered the feature of the cost of production and marketing, Mr. Spencer. I haven't gone into that. (3637.)

Q. You come in here as an expert presenting to this commission these exhibits purporting to show the volume of the traffic to move, the routes over which it will move, the rates to be charged for it and the revenues to accrue, don't you?

A. No, sir. I merely rate the tonnages which have been introduced and supported by the witnesses already appearing.

Q. Well, if it is absurd you, as an expert, desire to call attention to it, don't you?

A. Why, I am willing that any attention be drawn to this that you wish, so far as that matter is concerned. If they have supported these tonnages to the California markets, and I apply current rates, that is all that the exhibit purports.

All these commodities here, grain, hay, apples, potatoes, vegetables, cattle, hogs, are the products, or are of the ten southwestern counties of Idaho as assembled from the Spangler and other exhibits or estimates, indicated for movement to California markets via cross-State route. As I understand, the witnesses introducing these exhibits indicated that the products were going to markets specified, Los Angeles and San Francisco. I got that understanding from the exhibits. I haven't heard all of the witnesses.

Q. Well, those exhibits did not indicate they were going to (3638) move hay from southern Idaho counties to Los Angeles, did they?

A. I have explained that feature, I think, fully several
2005 times, and that is they indicated to California markets. I am giving you the advantage of every doubt when I take the Los Angeles markets as one of those. I could claim it 100 per cent San Francisco and raise the ton-mile accordingly. I would not hesitate to do that as a traffic expert and represent to the commission that it was a practical proposition. I am not speaking for the tonnage in its origin or destination, at all.

Q. Now, in any event, you have taken all of that tonnage and moved it over the cross-State line and the Southern Pacific hauled it down to San Francisco and to Los Angeles; is that right?

A. No. I am just taking that portion that is indicated for cross-State line movement.

Mr. ELLIS. I think you will recall, Mr. Spencer, that the Spangler exhibit does not include all of the tonnage but merely an estimate of the portion which would move via the (3639) cross-State line.

Mr. SPENCER. Oh, I know. It was presented with that same definiteness reflected by some of these other estimates.

2006 The so-called Spangler exhibit manifestly does not include all the tonnage that is originating from the southwestern Idaho counties to the cross-State line. I say it only embraces the portion indicated for the cross-State line. The exhibit may carry other data, but I have only used the portion indicated for the proposed cross-State movement. (3640.)

Q. You have in that exhibit 300 carloads of sheep moving from these originating counties to San Francisco via this cross-State line. Now, would the fact that no sheep have moved from those counties in the past years to San Francisco impress you as a traffic analyst, considering the routing of traffic, as to whether that is an absurd contention?

A. No; I would think that it runs to the very essence of the cross-State line. I think it has been testified a number of times that it is considered that it would give impetus to the industry and give the opportunity of the markets to the west coast.

Q. Notwithstanding the fact that Idaho lambs and sheep have consistently gone to the eastern markets?

A. I understand so in the past. I am not dealing with that feature of it, however. Under existing routes probably, the central California lambs the same way.

As to why I split that item fifty-fifty and gave Los Angeles 300 cars: I have no method of knowing just what the division would be and I split it that way out of fairness to you, I would say. With respect to whether there is any embarrassment now from these southern Idaho counties to move sheep to Los Angeles, as far as (3641) distance and route and service are concerned: I think it is admitted, or conceded, that it is eminently desirable that there be the diversity of routes available.

2007 Q. Now, just answer my questions, Mr. Wiggins. I asked you whether there was any obstacle to the actual movement of sheep from southwestern Idaho counties to Los Angeles now, whether it was not as good a route as via the proposed cross-State line and the Southern Pacific line for the movement of the business, a shorter line and as well operated and constructed line.

Mr. ELLIS. I don't think it is proper cross-examination.

A. I don't know as to the marketing.

Mr. ELLIS. I don't think it has anything to do with what the witness has testified to, but if he can give you any information I have no objection.

The WITNESS. As I say, I haven't taken up the marketing study. That has been——

Q. (By Mr. SPENCER.) I am not asking you about marketing at all; I am asking you whether there is a good, open, available, efficient route, main line railroad, from Boise, Idaho, to Los Angeles, California, via Salt Lake, that is shorter than the proposed route; and you can answer that question without going into a lot of side discussions about marketing.

A. I think so far as existing lines are concerned and the proposed (3642) cross-State, that the mileage is substantially the same. That is my recollection. And the Union Pacific certainly has a line from Idaho via Salt Lake and the Salt Lake line to Los Angeles.

Referring to Exhibit 76 in this case it appears that the total movement of sheep and goats from all points in southern Idaho, Mountain Home and west, in 1926, was 35 tons or three cars. As to where we are going to develop business to the extent of 300 cars, or 3,300 tons, and move them via a foreign line to that market: I haven't gone into that marketing feature of the case. That has been handled by other witnesses.

2008 I said off hand that the route, say, from Boise to Los Angeles via the Union Pacific line the entire distance is approximately the same as via Crescent Lake and the Southern Pacific. I haven't those figures before me now. As a matter of fact, I believe it is shorter via the proposed cross-State line. If I am not

mistaken, the distance breaks back there about 75 or 80 miles to the east, maybe 100. I believe I am familiar with the short-haul provisions (3644) of the interstate commerce act. With regard to my opinion about the matter of short-hauling the Union Pacific lines in putting in a through route via Crescent Lake on that movement, say, from Boise to Los Angeles: I recognize fully, I think, the axiom of railroading whereby the right to route via the line of origination exists. I might say that I believe that this traffic in the main is traffic that would not admit, however, of other than a two-line route. In other words, at most you could bring into question the possibility of it routing Rogerson-Wells to the bay cities and northern California territory, which, as I say, would be a Union Pacific-Southern Pacific haul identical almost as to the Union Pacific and Southern Pacific at Crescent.

Exam. ROGERS. Well, what I am talking about is this: I want to get your thought on the ground by which you put in a through route, say, from Boise to Los Angeles via Crescent Lake and the Southern Pacific as distinguished from the Union Pacific line, bearing in mind the provisions of paragraph 4 of section 15, which says that you can't short-haul a line in effect unless the route is unreasonably long? (3644.)

A. Well, I would feel on that question, just as an illustration, take livestock, for example, as a typical commodity seeking bay city markets and possible diversions there, that the very practical
2009 necessities of the situation would dictate that those rates be substantially the same and that they have the privilege of that movement via the cross-State.

Exam. ROGERS. I am not talking about—where are the bay cities? Are they San Francisco and cities in that vicinity?

A. San Francisco Bay and points in that vicinity.

Exam. ROGERS. I am talking about a route from Boise to Los Angeles.

A. Well, I would think that it should be practicable to allow that western Oregon traffic that outlet.

Exam. ROGERS. I am not talking about what is practicable. I want to know if you would consider the route that is 75 miles longer an unreasonable long route?

A. On those distances I would not think that that was perhaps undue circuity.

Q. (By Mr. SPENCER.) Now you say that Boise is practically equidistant; now you know, and you give consideration to available routes when you get in here and make a traffic statement to take all their tonnage away from them, don't you?

A. Well, I have figured those in every conceivable way, I think, Mr. Spencer, at one time or another.

Q. Now just look at your figures where you figure the distance (3645) from Boise to Los Angeles via Salt Lake, Union Pacific system lines, and tell us the distance.

A. No; I see I haven't that figure right before me. I have the distance via the proposed cross-State line, which is the only distance I am dealing with here.

Q. Well, it is 1,204 miles, isn't it, from Boise? If it is 1,204 miles it is 50 miles shorter than your proposed cross-State line route, isn't it?

A. Yes; to Los Angeles.

2010 If the rates, generally speaking, are the same, a difference of 50 miles probably would not make very much difference as to how the stuff would be routed. That is, what I have in mind is that there are a range of distances—of differences that are existing to-day, and I think that is probably a lesser one. As to whether I say it would not cut much figure, a distance of 50 miles: I think it is a factor; but then I don't know that it would be the only one, or the controlling one. I think the compensations that would go to the shippers (3646) handling the commodities, and other factors considered, would be determining. I could not say that the mileage factor alone would determine it.

Q. Well, all right. Now by the compensations, I assume you mean the opportunity to test the so-called bay city market that is what you have in mind?

A. Well, whatever they were; all that they might be.

Q. Well, what were they that induced this routing?

A. Well, that would be one that I would consider.

Q. Was that the principal one?

A. There might be others.

Q. What others?

A. Time might be a factor.

Q. Well, but you have got a shorter route here the other way.

A. Well, I could not undertake—I could not undertake to do or to enumerate all of the——

Q. Now Mr. Wiggins, you have taken this and routed this 50 miles longer by these outside considerations. Now Boise is 63 miles more distant, as I figure it, 63 miles more distant from San Francisco via the already open and operated Rogerson-Wells line than it will be, according to your mileage, via the proposed cross-State line. Now they have got the same considerations and advantages via the Rogerson-Wells line as they have with the Crescent Lake route, haven't they?

2011 I don't know what those are. (3647.) I think that has been covered. I have enumerated a number of things. I do not want to be understood as saying that I don't know whether there are any different considerations attaching to the Rogerson-Wells San Francisco route than there are via the Crescent Lake route. I have my own opinion as to those. I think that there are advantages to attach to the proposed cross-State route, and that the matter of marketing to the logical territories via desirable routes offering alternative markets is a very, very great one. They haven't that now to any such extent as they would have over the proposed cross-State.

They have the entire Pacific coast open to them (3648) if they have the cross-State route, and I think it is a highly desirable one for that entire territory. They do not have all of the Pacific coast markets now. They start now and it is not optional; they start in directions that are decisive. As to whether they have the Ogden route now that they won't have via the cross-State line: That is all right. You are forgetting the entire north Pacific coast, which is equally open to them if they come the cross-State. We are going to move them 130 miles longer via the cross-State line so that they can have the advantage and option of the Seattle markets, Portland markets, San Francisco, Los Angeles—the entire coast. I didn't say about the rate. As to whether we are going to give them the same rate to Portland via the cross-State line as we are via the direct route from Huntington to Portland: The rates from that territory are the same today, San Francisco and Los Angeles, generally speaking, irrespective of the differences in distance. Asking if I assume (3649) that a man has got any advantage when he arrives at Crescent Lake on a route as much longer as the cross-State line is to Portland, as
2012 compared to the Huntington route: I don't know just what difference that would make in the rate. There is some difference in the Seattle and Portland rates on those distances, but, as I say, the California markets are generally the same.

Q. You have got some eggs here, 52 carloads of them to Los Angeles, and 52 cars to San Francisco. Now of course those are not all the eggs that were shipped by carloads out of that southern Idaho territory you are discussing, are they?

A. This is only the portion allocated for proposed cross-State movement. I don't know what the total is.

Q. No. Now if it appears that during 1926 the total movement of eggs—that during 1927 the total movement of eggs from the southern Idaho counties, the whole southern Idaho country, including the eastern, central, and southwestern counties, the whole productive area, to Los Angeles, was 36 cars, and to the bay cities 16 cars, would you expect on the first year of operation of the cross-State line to move 104 cars to those (3650) destinations and split them fifty-fifty?

A. Well, there again you harken back to the agricultural tonnages and I have taken them without the marketing study on them, of course.

Q. Without marketing study—without consideration of production?

A. Well, I haven't gone into that feature. I haven't made a study of that production. I have considered the various routes.

These folks that have made the tonnage studies, I think they know, in the main, about the rates and the routes and that sort of thing. I think that they worked cooperatively with the Idaho Commission, I understand, and they have the rates.

2013 Q. (By Mr. SPENCER.) You don't assume any responsibility for routing or for production or marketing conditions, or any-

thing else; you severally go in here and confer, and each one puts in his contribution to your total summary, but you don't sponsor the correctness of this total summary, do you, at all?

A. When they allocate the tonnages from the total productions which they say will move (3651) over the cross-State, I rate those; I have rated those. Theirs is the allocation from the total production, and as to the markets and as to the route. Now then, I applied the rate in the manner that it is explained here. That is all the responsibility from that territory that I could assume. I see nothing wrong with the table myself.

As to how much revenue we have got to the cross-State line on this Exhibit 104: This is recapped at the bottom of page 3 of the exhibit. It is $158,531.21. I say and represent that at the rates indicated in the exhibit, that on a straight mileage prorate is the allocation to the cross-State sector. That is on westbound traffic only. (3652.) On the tonnages shown I consider that the ton mile rate is low. In fact, that is why I included the Los Angeles mileages, and it has pulled it down. I think that those tonnages moving to the California markets indicated would be in excess of what I have used here. We are coming in here now showing the revenue that is going to accrue to the cross-State line; to rate the tons at the current rates. As to whether or not we are representing to the commission that on the westbound business originating from those western Idaho counties, that during the first year of operation of the cross-State line there will accrue in cash revenue $158,531: As based on the exhibit, I think that is correct. I do adopt those tonnages moving as my own figures. (3653.)

Q. Tonnages and all?

2014 A. Well, I have explained how I took the tonnages.

Q. Yes. Well, you don't want to sponsor those, do you?

A. I had no opportunity to do that.

Q. No.

A. That is not my part of the business.

I will very gladly set about giving you the total revenues by years that I expect for the cross-State line, separated as between Idaho traffic, traffic originating on and destined to the cross-State line, and so-called bridge traffic to and from western Oregon. I can't state just how quickly I could do that. I have endeavored in that line to set up these different units and blocks of traffic so as to admit of what you request. It, however, is not so grouped in these exhibits, and I would request the privilege of computing it in a supplementary statement.

Q. (By Mr. SPENCER.) Vegetables, on your Exhibit 104, 1,350 tons, 90 cars to San Francisco and Los Angeles, 90 cars each, 180 cars total. Do any vegetables move there now from southern Idaho to Los Angeles and San Francisco?

A. I haven't checked that movement, Mr. Spencer. (3654.)

Q. What are you doing? Just in conference with those gentlemen reaching out into the air and building up an imaginary statement of tonnage here?

A. They conducted their studies and they made their allocations, and they took the portions via the cross-State, and they so designated them, and I have endeavored to rate them.

As to the judgment exercised in splitting this given tonnage between Los Angeles and San Francisco in the vegetables fifty-fifty: That, I thought I had explained at the outset, was done arbitrarily. I did it solely for the purpose to take into consideration the long mileage, thereby reducing the long mileage to Los Angeles,
2015 thereby reducing the ton-mile rate and for purposes of securing an ultra-conservative figure against that tonnage. I did not have any idea of suggesting that that much tonnage would go to Los Angeles, or that that was where the witnesses said it would go. (3655.)

Q. (By Mr. SPENCER.) Now, Mr. Wiggins, if all of this business as reflected by the exhibits in evidence on the actual movement goes to Los Angeles, or substantially all of it, the 50 per cent that you have allocated to the bay points as its destination with the higher rate would make a very material difference in your study and in your return, wouldn't it?

A. There again is a feature I am not undertaking to answer for, Mr. Spencer. Certainly if these tonnages don't stand, my figures of rates won't hold them.

My action in dividing this tonnage fifty-fifty between Los Angeles and San Francisco is arbitrarily made for the purposes which I have explained, wholly intentional from the beginning, and I have no apology for the division, unless I have done injury to the supporting witnesses who have specifically testified as to those markets. I did not get any suggestion from them as to whether it should go to Los Angeles, whether that was the market or whether San Francisco was. (3656.) I took it totally without any of them in sight or sound. I worked it on the fifty-fifty division arbitrarily myself.

This Exhibit 105, estimated tonnage and revenues via the cross-State line, is east and westbound all through each group there, as set out in detail in Exhibit 28. That is the large blanket exhibit carrying minute detail of compilation, and that included this same southwestern Idaho business. The Idaho westbound, which you have been discussing, is summarized under Group 6, second page.

2016 As to what westbound business is included in Group 1, for instance: That is Oregon; Oregon traffic created only.

Q. There was some 3,700 cars, wasn't there, westbound?

A. Well, it is summarized here. The Exhibit 28 shows it in minute detail. I have taken the two for the sake of making a (3657) summary. The east and west is grouped in that, but it is Oregon traffic solely. It originated or terminated in Oregon. On that east and

westbound business, Oregon business, that is, traffic created, that does not include the lumber business. Practically all western Oregon business is not diverted traffic. Exhibit 28 will show what traffic has been claimed from western Oregon.

Exam. ROGERS. Exhibit 105 shows that, too, doesn't it, at the top of the first page?

A. Diverted traffic only, Mr. Examiner.

Exam. ROGERS. On Exhibit 105, east and westbound, at the top, is that the diverted traffic?

A. No, sir. That is created traffic, as indicated just beneath the word "Group 1."

Q. (By Mr. SPENCER.) Now, you have got the estimates that make up—I want to get the east and westbound division of that. Have you got the split on that, how many east and westbound (3658) cars?

A. I haven't it right here. It is in Exhibit 28, set up by direction. Off hand I can't enumerate the commodities that are in Exhibit 28. They are set up, however, by commodity and by direction.

As to whether there is some particular reason in splitting this proposition here, picking out the Idaho counties and then the Oregon counties: Not in particular, except for the ready identification of the traffic blocks, and also the fact that the data covering the different units was received at varying times.

2017 In this Group 2, San Francisco and vicinity, to Oregon points east of Crane, as to why Oregon points east of Crane: They are points that are this side of or short of the Idaho zone eastbound. They represent, I might say, nine different points in eastern Oregon west of the Oregon-Idaho line and east of Crane. I could name a number of them. They are not confused with Exhibit 28 but are set up separately (3659) here. They are taken from the Newton exhibit. Mr. Newton's exhibit indicates nine points, I believe, east of Crane and west of the Idaho line. I have used Mr. Lounsbury on Group 5, as explained.

Q. Now, you have taken out of Newton's list 471 cars going from San Francisco to Oregon points east of Crane; is that right?

A. Yes; to the nine points that were named. I assume there were others, but, as the exhibit explained, those are the nine principal points.

I believe, if there were cars to those points, Chevrolet cars were included. As to whether that is even over the rates which are lower by Portland: I don't know whether they were Chevrolets or what they were. (3660.) Wherever I have considered the rate on automobiles I have used the rate via Portland. I am not going to route them via there, whether there is or would be any such movement or not. I had the routing on the cars and had the rate. I took the rate from the tariffs and had it corroborated by your offices here in Portland. I have no rate via the cross-State line, and I applied the manifestly lower per-ton-mile rate to that shortened routing. I know, as a matter of fact, that the Oregon-Washington Railroad &

Navigation Company operates in conjunction with the McCormick Steamship Company and has its rail and water interchange terminal, a large proportion, down here in this harbor. (3661.)

2018 With respect to whether I think that the business so destined to Ontario that will move by water and rail would be given voluntarily the same rate by the Oregon-Washington Railroad & Navigation Company in conjunction with the Southern Pacific on a cross-State line haul that is given water and rail through the Portland gateway: I just used the rail rate via the all-rail haul which the exhibit shows. These automobiles moved all rail Southern Pacific to Portland and the O.-W. R. & N. Company to destination, and the rate is on the same basis, and that is the rate that is used. I am using the all-rail rate on autos for the all-rail movement, from San Francisco to Portland and thence to Ontario, as they moved. The exhibit from which I took it, as you may recall, indicated the routing, as to whether it was rail or water, and I took the cars that were all-rail, and we observed the all-rail rate. On the cars that were by water I took fifty per cent of the number by water and rail and allocated to the proposed cross-State. There were a whole flock of rates. I had no automobiles moving all-rail and moving (3662) water and rail.

Q. Well, I am not talking about automobiles, Mr. Wiggins, now, for the moment, but I say that given commodities—take sugar, for instance, it will move all-rail and move water and rail, doesn't it?

A. Yes; I think some does.

As to whether the rate on all-rail movement would be higher than the rate water and rail to Ontario: While I didn't have the steamship tariffs and didn't check them, in the main the San Francisco to Portland rate reflects that competition, and you have that as against your combination rail and water over Portland. I assume there isn't so much, I take it, difference there. As to how the rail rates from San Francisco to Portland compare with the rail rates

2019 from San Francisco to Crescent Lake today: The Southern Pacific Company has fourth section relief both east and west of the Cascades. You lifted up, vertually, generally speaking, the fourth section relief that existed west of the Cascades when you opened the Natron line, and lifted it over to the east side. (3663.) The rate is probably higher at Crescent Lake right now than it is to Portland. I haven't checked it. I haven't checked the rate to Portland, all-rail, from San Francisco to Crescent Lake, on sugar. I don't know just what that is. Those practical considerations do not deserve recognition in the preparation of a study that I wanted to have followed in routing of traffic and movement by volume. I consider that as to that feature the circuitous mileages which I have used in the determination of ton-mile ratings largely in and of themselves compensate for those differences, bearing in mind the cross-State road. Asking if I don't think the tonnage would move on a 71-cent rate to Crescent Lake, if you could practically accomplish that rate to Ontario by rail: Well, you would have a long way

from Crescent Lake if you took the San Francisco to Portland rate which you mentioned to me. That is just one leg of the rate, and I certainly think that automobiles would move that way across there.

Q. You don't think the commission would apply the fourth section rates to Crescent Lake, or to Ontario, do you? Take its business away from—— (3664.)

A. It reflects back into all of that territory at present, and probably would, regardless of the route.

With respect to this Alkali Lake outbound and Alkali Lake inbound; I used 50 tons a day as the basis. I think Mr. Lounsbury has used the same. Mr. Lounsbury gave Alkali Lake tonnage. I took the Emerson statement of 50 tons a day.

2020 Mr. SPENCER. How do you build this up gradually? You have got a plant now that will turn out fifty tons a day of a given commodity, and you step it up by years, fifteen thousand tons to about seventeen and eighteen, gradually. Is that the way that it will develop?

A. I take it twenty-five per cent increase on the third and on the fifth, and the other is by interpolation.

Q. Where is this outbound movement to and from?

A. In that we consider San Francisco and Portland on the outbound (3665) commodity.

I applied the rate of 25 to San Francisco and 20 to Portland—$5.00 a ton to San Francisco, and $4.00 to Portland. As to what I base my $4.00 a ton rate on: I checked some rates—had them checked from Washington territory, in eastern Washington, to Seattle and Tacoma—in other words, the coast points in Washington—and took approximately the percentage relationship for the Oregon business. I have been over that Alkali Lake. There is a place there such as they had in the operations such as were explained. There isn't any railroad there from Alkali Lake to the proposed cross-State line. I assume the distance is twenty miles to the cross-State line. (3666.) I have assumed the construction of a plant and the construction of a railroad and the placing of the institution in operation so as to give to the cross-State line the first year of its operation $28,855.40. Inbound commodities were oil and ties and rails, assuming the construction of the 20 miles to reach the cross-State line, where the traffic would be delivered, and a small amount of miscellaneous. As to whether I am figuring outbound product from a plant there and crediting the revenue to this cross-State line, and at the same time crediting revenue of the rails and ties that were being used at the same time on the construction

2021 of a railroad into Alkali Lake, I considered that the plant construction, and so forth, would beat your construction, and that the commodities inbound, like rails and ties, would be certain. It is true that these rails and ties couldn't move in until the cross-State line was there. I assume that they would move by the cross-State line in. (3667.) The rails and ties couldn't move until the

cross-State line was built but the plant construction, as to the unit for the industry that Mr. Emerson explained, would reach the road, the delayed unit in construction. We are not going to put in the same volume of rails and ties each year, this is just the first year. We are going to increase the output on the plant the very second year they are in operation. I had assumed that increase explained. We divide the tonnage between San Francisco and Portland fifty-fifty. I didn't undertake to go into the eastern or other markets. It was specified it would be very general. Referring to Mr. Lounsbury's exhibit, Group V, where I took this 3,000 tons inbound tonnage (3668): That was in docket 14392. By Mr. Lounsbury's exhibit in the last case we found 3,916 tons for the cross-State line. At that time the cross-State line was connected theoretically with Bend, the Great Northern wasn't into the Klamath territory, and the cross-State line was connected with Lakeview and also with Crane. I believe the line was under construction from Crane to Burns. I don't know if it was completed. Mr. Lounsbury's increase, I believe, in his total tonnage exceeded the (3669) 12½ approximate which I have used, but I used uniformly 12½ on the four leading years. I took his figures for the first year, and made my own computation for the rest, because it isn't shown separately. I applied the 12½ per cent increase each year. That is on the original, from the first year.

Q. That, I assume, was just an arbitrary application of that increase?

A. Took the same tonnage, the same revenue, and applied 12½ per cent for the second, third, fourth, and fifth, based on the
2022 first, it not being shown in that detail here.

The first-year figure for Mr. Lounsbury's revenue for that 3,916 tons is $16,770.50. I took the same revenue as used in the exhibit. As to where there is anything in this grouping that I have got in Exhibit 105 that would reflect Lounsbury's outbound tonnage: I have the outbound indicated here. (3670.) I haven't used any other figures, because I have the tonnages supplied in every other instance. I didn't have the detail of this exhibit and didn't have time to figure it in that detail. Those tonnages, for example, in Oregon traffic created, Exhibit 28, are covered thoroughly.

Q. Now, you have got Idaho traffic westbound, Group VI. Isn't that included on your first group here, Group I? You have got east and west bound——

A. No.

That is Oregon traffic solely, that 37,643 cars. I took the westbound traffic from Exhibit 104, which was just introduced. The eastbound based on the Newton exhibits.

Q. Well, that 16,700 cars is Teutsch's exhibit over the five years, isn't it? (3671.)

A. The 6,143 conforms to the Teutsch report.

Mr. DEY. Where is 6,143?

A. At the outside on page 1, Mr. Dey.

Mr. DEY. Oh, yes. That is Teutsch, and this other is Spangler and Newton.

I made an exhibit myself in the last case on the traffic originating on and destined to that cross-State line. I adopt Lounsbury's exhibit here for sake of convenience; under the emergency of time.

As to whether it is just as convenient to adopt my own as this
2023 Lounsbury's: I haven't the detailed figures in that way.

There is no other segregated in just that way to this unit, that I know of, in my exhibit.

Q. You made it up in exactly the same form that Lounsbury did, didn't you, in the last case? You took identically the same items that he had taken in his application for a certificate of convenience and necessity to the commission for the Burns (3672) line, and multiplied the Burns extension to Crane by the additional mileage that was involved in the whole Oregon situation? Now, that is the way you figured it, didn't you, in the last case?

A. No; that was one exhibit which was compiled in some such manner but I took the basis for the exhibit, in the main, was the tonnages by the individual witnesses as they appeared. In other words, that was the handicap of the situation in that case.

Q. In any event, when you come to take the tonnage for the cross-State line you do not adopt your own but take Lounsbury's on inbound tonnage, and then adopt it here for the first time upon the inquiry of the examiner in this case, is that right?

A. I adopted this as a minimum because time wouldn't permit of feathering out that detail on a minimum amount of traffic. It was a convenience proposition solely.

Q. That tonnage of Lounsbury's was based upon a system of railroads involving some 310 or 312 miles of railroad to be constructed and operated connecting up with the towns and cities I have mentioned, to Lakeview, to Klamath Falls, Bend, and Burns, and here is 189 miles with no towns and cities touched at all, and you apply Lounsbury's exhibit as your own. (3673.)

A. Well, it is true that that exhibit in its entirety covered these different proposals and points which you mention, but the exhibit is also very specific by way of allocation to this particular sector, and that is why it found ready usage.

2024 Exam. ROGERS. Well, in that case you were figuring on common user of the Natron cut-off, were you not?

A. That was given—that was one of the considerations—I don't know—an alternative proposition; I believe that was an alternative in the case. I am not certain of that.

Mr. SPENCER. Don't you recall that? You were the traffic expert for the State in that case.

A. Well, you had a number. The common user was an alternative proposition, as I said.

Q. You made the traffic exhibits here which received such serious consideration by the commission.

A. That's all right. The tonnages were taken from the witnesses for the State. (3674.)

I don't know to what extent Mr. Lounsbury considered in his exhibit that that common user of the Natron cut-off probably would have some bearing on this figure; it might.

Exam. ROGERS. Well, what weight can we give to your figures, if we don't know about these things? That is what I am interested in.

A. If I may explain, Mr. Examiner, that this is, as I regard, practically the least item from a tonnage standpoint, or next to the least, but it is inbound of a variety of commodities that are extremely tedious to deal with, but I regard it as comparatively negligible. It was solely attributable to the emergency of time by which I used it. I am just as agreeable to working the detail in the time permitted, and I am confident that there is nobody but would concede but that there would be some tonnage in there, and I believe, too, that this represents pretty nearly a minimum. I think that is a foregone conclusion.

2025 By the least item I do not mean the least number of witnesses and number of items submitted; I mean the number of blocks of traffic that were designated in the current exhibits that were being shown here. There were a number of witnesses, as a matter of fact, and it (3675) was the minimum of all that were introduced, as far as I know. That is not particularly the reason I selected them. The controlling reason was to show something to the inbound after the orderly manner of rating from points and commodities, and avoid the loss of time which the detail of it would occasion. I selected it and adopted it as a minimum to that sector.

This exhibit 106 does not purport to show all money that would accrue to the cross-State line, $1,147,081.00, on this tonnage estimate. It just merely sets out the straight mileage prorate of the total revenue after the manner indicated. You necessarily have to refer to Exhibit 16 for the total revenues to accrue to the cross-State construction.

Q. Now, as I understand you, by this Exhibit 106 you embrace and include in it all of the western Oregon business now moving via Roseville, California, and Ogden, and you divert it to the cross-State line; is that right?

A. I have used just the Ogden routed traffic, just the portion of the western Oregon that routed via Ogden.

Q. You haven't left a car there for Alturas or for Roseville from all of western Oregon, have you?

A. I have taken—no; in this I have computed it on the total (3676) Ogden tonnage.

As to whether I think the Southern Pacific Company is going to regain any of that business to either its Alturas line or its Roseville line, I don't know how much. I think it would be reasonable that you would.

2026 As to why don't we make allowance for that when we come in here with an exhibit upon which we would expect this com-

mission to order somebody to spend $11,000,000: We have taken care in the exhibits that have gone in to make that allowance for the Alturas line, figuring it alternatively, and I have so figured in the remaining years of this, except for the correction, as I explained, in the fourth year.

Exam. ROGERS. Well, do you contemplate that the Alturas line will be in operation before the cross-State line is in operation, if ordered within reasonable dispatch, or after?

A. Well, I couldn't say as to the dates, but in considerations for accounting and computing purposes here we considered the Alturas traffic after the third year—after the third year the Alturas line in full operation, assumed that. (3677.)

I assumed that the construction of the Alturas line would be completed.

In the first year estimate here I have taken in all of the Southern Pacific western Oregon business through Ogden, whether it originates at Portland or in these northern counties. Mr. Newell considered that. Exhibit 16 on the diverted traffic will account, I believe, for corresponding cars.

Q. He takes the tonnage furnished by you, doesn't he, and states, "Furnished by Mr. Wiggins"?

A. As I stated, the other way around, in so far as this exhibit I have used the cars that are in his exhibit, but, as a matter of fact, the count via the Ogden gateway is the basis for both.

Q. I understand that you took it from him, and he took it from you?

A. Accordingly as it is used in the different exhibits; yes. (3678.)

In Exhibit 106 I have got in everything from western Oregon that the Southern Pacific hauls through the Ogden gateway, in either direction. In so-called cross-State traffic I have made
2027 up the first year on that basis, the Ogden routing. In this first year the Bend and the Klamath Falls business is included.

I was not down to the chamber of commerce here talking to those people when they were getting them into this case.

Redirect examination:

Mr. Dey asked me about attending a Portland meeting in which the chamber of commerce was involved and I answered "No". Upon thinking back over that, I do recall that I was an onlooker at one meeting in the Portland Chamber of Commerce. I wanted to correct that.

I have checked up on the exhibit numbers that I (3679) relied on in preparing my Exhibits 104, 105, and 106, so that I can make that clear in the record at this point. I have taken the copies as officially marked here in the course of the hearing, and can give you, I believe, the number and witness—the copies; I didn't carry both. In the Spangler exhibit, the Idaho exhibit by Spangler was No. 23; the Newton exhibit used in the case of Oregon tonnage, tonnage to Oregon points east of Crane, is Newton No. 8; the eastbound Idaho

tonnage estimates, Newton No. 9. I just considered them Idaho commission exhibits, and made no further detailed reference. Oregon traffic created, Group I is shown on Exhibit 105. I might state in connection with one of the Newton exhibits which accounted for 11 months, omitting the month of August, that I prorated that, to the extent of taking one-eleventh, for the full year. (3680.) I did not adopt or use Mr. Lounsbury's exhibit because I didn't have any of the records in this, or his exhibits, in this case. I have not had an opportunity to check this exhibit over to determine whether I could adopt it or not. I have seen the exhibit in the office here, or in the files, but not to check it over. The particular
2028 purpose in adopting a figure for inbound tonnage which Mr. Spencer suggests was lower than the one I used in the previous case was the emergency of time and the fact that the allocations out of the exhibits which I introduced in the other case were not specifically made to this particular segment of the proposed construction. I took it because of the readiness and availability and the emergency. (3681.)

In my judgment, I think that exhibit of Mr. Lounsbury's for inbound tonnage underestimates the traffic. I wouldn't want to do an injustice to Mr. Lounsbury, but I regard it in any adoption or usage as a minimum.

I testified to the effect that I had used on traffic from San Francisco inbound to Idaho, in applying my rate, or arriving at my rate, the existing rates via the longer haul. I used it in ascertaining the rate per ton-mile which I have applied to the proposed cross-State line. I assume that the total rate from San Francisco to Boise, for example, via the cross-State line might be the same as for the longer haul via Portland or via Ogden. It might ignore the difference. I assume the rate is maximum. I do not assume that the earning would be the same per ton-mile, or that it would be the same for the entire haul. I think that the allocation on the ton-mile rate used is less than—that it is a minimum, conservative.

Q. Well, then, if I understand you correctly, you use it merely for obtaining the earnings per ton-mile, and not as suggesting (3682) that the through rate between the points would be the same via both routes?

A. I manifestly have no way of determining that, and used the per ton-mile on the only basis ascertainable.

2029 By actual count I checked the automobile shipments from San Francisco to the interior, southwestern Idaho and eastern Oregon and what extent they were moved by water and by rail. My check showed, almost wholly, from the records, by rail, all-rail, Southern Pacific to Portland and O. W. R. & N. to the interior. As to what factor governs that movement by rail as against water:

In that particular kind of traffic it is my opinion that the factor of time would be a very important consideration, and there are probably other compensations that go with it, but I would think the

time and the desirability and the manner and character of carriage that the rail offers would almost be controlling.

Mr. ELLIS. Oh, just one more question please. On Exhibit 106, where you refer to Exhibit 16 for the revenues claimed to the cross-State line, in referring to Exhibit 16 in that manner (3683) did you have in mind the Exhibit 16 as already introduced, or as it is to be supplemented by Mr. Newell's further testimony?

A. As supplemented. He has, I believe, certain supplemental data in connection with that exhibit.

Recross-examination:

Q. (By Mr. SPENCER.) There was one question, if I might, that Mr. Ellis asked you about, Mr. Wiggins, as to the rates through Portland, and reviewed your application of them through Crescent Lake, and you, as I understand it, had divided on the mileage prorate between the cross-State line and the Southern Pacific on the Crescent Lake movement?

A. I just made it straight mileage prorate to the cross-State.

Q. Which means mileage prorate to the Southern Pacific?

A. Well, it would mean the allocation of a different unit controlling the 189 miles, if I understand you.

2030 Q. Every sector, as you call it, or unit, in the route would receive a mileage prorate if the cross-State line received a mileage prorate, wouldn't it? (3684.)

A. I don't know what your divisions would be. Manifestly the cross-State—the mileage prorate allocation to the cross-State isn't what the cross-State traffic would be entitled to or would inherit I take it, but it is probably the best practical method that I knew of by dealing with it conservatively. It is the method I have used. I think, just as in Exhibit 106, in the allocations that the cross-State is entitled to a great deal more than is shown in there.

Q. The rate by rail to Southern Idaho from San Francisco via Portland is a combination of locals, isn't it?

A. I believe, taking, for example, a rate like San Francisco to Boise, I think that is 72 cents plus $1.82, which would make the combination rate of approximately $2.54, I think.

Q. Combination of locals?

A. Yes, sir.

Q. Did you make the combination of locals via Crescent Lake?

A. Well, I don't know how that would be. I haven't concerned myself with the matter of the joint-rate basis, those ordinarily being inaugurated by the carriers.

Q. Now, one would be a long, circuitous route, and the other a short one, if they were moving rail? (3685.)

A. The Portland routing as against the Crescent Lake, you said?

Q. Yes.

A. The cross-State would shorten up the movement, and incidentally the time, a great deal; yes.

2031 Q. What would you consider an unreasonably circuitous route, where that distance is involved, nine hundred to eleven hundred miles? How much margin do you allow there before you would throw one line into an unreasonably circuitous and impossible route?

A. Well, I don't know that I figured that. I think probably the Interstate Commerce Commission decisions as a whole offer some guidance on that. I don't just recall what it would be styled. I presume circumstances and conditions alter cases. I presume it would be a matter of individual cases, individual situations, individual conditions, or particular conditions. As to my opinion upon that as an expert: Offhand I don't know. Ordinarily, as I say, it would (3686) be as revealed by the commission where mileages in excess of five hundred miles are reached. I don't just recollect on that. Mileages shorter would probably reflect more closely the differences.

Q. I asked you the hypothetical question here. This is nine hundred to, say, eleven hundred miles involved—I don't know just what the difference is around via Portland and Crescent Lake. Do you have any opinion on that?

A. No; by way of—not exactly, but by way of specific example, we were speaking of automobiles there—I would consider that the shortening of the distance from California, from San Francisco, for example, to the Idaho territory, even, as where those automobiles go, would be of sufficient importance as to virtually control that movement in there. In fact, I have so considered that it would claim the traffic to the rails that way.

Q. Well, you have diverted all the western Oregon business to this cross-State line, and all of southwestern Oregon business, practically. I am wondering whether in all commodities you have got any yardstick whereby you would classify the circuitous route
2032 as unreasonably circuitous and excessive, so as to bar them from participating in the traffic here, how much different percentage relation there should be, but if you haven't any judgment on it I won't press the question.

A. No; I think it is a matter that a hard and fast rule (3687) couldn't be applied to all the cases alike. I think it is a matter that comes back to the particular situation and particular conditions.

(Witness excused.)

F. L. Burckhalter was thereupon recalled as a witness, and, having been previously duly sworn, testified as follows:

Direct examination:

I prepared a memorandum that I suggest might be copied in the record that gives the information asked for. It is just a statement of figures.

(Said memorandum was copied into the record, as follows:)

Interchange balance—Refrigerator cars, El Paso & Tucumcari—Year, 1926

Loaded refrigerator cars received from connections—El Paso	6,160	
Empty refrigerator cars received from connections—El Paso	17,723	
Total refrigerator cars received from connections—El Paso	23,883	
Loaded refrigerator cars delivered to connections—El Paso	27,441	
Empty refrigerator cars delivered to connections—El Paso	763	
Total refrigerator cars delivered to connections—El Paso	28,204	
Excess refrigerator cars delivered to connections—El Paso	4,321	
2033 Loaded refrigerator cars received from connection—Tucumcari	3,929	
Empty refrigerator cars received from connection—Tucumcari	46,073	
Total refrigerator cars received from connection—Tucumcari	50,002	(3689)
Loaded refrigerator cars delivered to connection—Tucumcari	41,766	
Empty refrigerator cars delivered to connection—Tucumcari	1,395	
Total refrigerator cars delivered to connection—Tucumcari	43,161	
Excess refrigerator cars received from connection—Tucumcari	6,841	
Interchange between the two gateways shows net excess refrigerator cars received from connections	2,520	

Southern Pacific Co. (Pacific lines)—August 22, 1928.

(Witness excused.)

J. P. NEWELL was thereupon recalled as a witness and, having previously been duly sworn, testified as follows:

I have prepared a supplement to my Exhibit 16. This supplemental exhibit contains calculations that the cost of moving that additional traffic which has been testified to by Mr. Wiggins and is contained in his exhibits, and the estimates of the resulting earnings from it, and also revisions of the tables of net earnings and return which are given in Exhibit 16. (3690.) I referred to Exhibits 104, 105, and 106 that Mr. Wiggins explained this morning. With respect to this supplemental exhibit, I think it is so fully written down here that very little explanation is needed. It contains no traffic which has not been testified to and presented in other exhibits.

2034 The cost per car which is applied to these various hauls has been taken from Exhibit 16, either exactly or by allocations which are very close to other figures already calculated and shown. Those costs per mile or per car are stated in the exhibit, together with the number of cars to which they are applicable, and the resulting cost. That cost is then compared with Mr. Wiggins' exhibits as to gross earnings, and then presented as to net earnings. This supplemental exhibit does not cover or duplicate any information contained in my Exhibit 16. As to whether it treats only of the potential earnings of the cross-State line from such additional items of traffic as Mr. Wiggins covered in his Exhibits 104, 105, and 106: It contains nothing else. (3691.)

Table XX of Exhibit 16, as found on page 139, is revised on page seven of this exhibit by the inclusion of these additional earnings. That table contains earnings calculated for that line on the assumption that the Alturas line would be built later and that the division of rates would be on a more favorable term to the cross-State line during those first three years than it would later. Then I also take Table XXII of Exhibit 16, page 142, and on page eight of this exhibit, I show what that would be if revised by the inclusion of these additional earnings, together with the rate of return which would then be produced. (3692.)

This supplemental exhibit sufficiently indicates in itself the sources of the additional tonnage on which I have computed cost and net earnings.

(The statement so offered and received, entitled "Supplement to Exhibit 16, Additional potential earnings of cross-State line," was thereupon marked "Complainant's Exhibit No. 107, Witness Newell.")

2035 I have concluded from the information contained in my Exhibit 16, and this supplemental exhibit, that the cross-State line and its construction could be justified with any traffic less than 100 per cent of the traffic to and from western Oregon moving west or east through Ogden, Utah. (3693.) That is fully dealt with in the exhibit.

It is true that my Exhibit 16 is predicated on the thought that the division between the Southern Pacific and the Union Pacific, if this line were built by the Union Pacific, could be so fixed that by diverting the traffic at Crescent Lake the Southern Pacific would make more money than it now makes on the same traffic, and the Union Pacific would also make expenses and some margin. You see, now, I assume you mean by the Roseville route. By the Alturas route, my contention was that it might be permitted to make the same earning. In making that statement I was basing my comparisons on the present divisions and present revenues of the Southern Pacific and the Union Pacific. I have not given particular thought to what our cost study (3694) showed as to the propriety of the present divisions between the Union Pacific and the Southern Pacific on the traffic handled as it is now handled. It has appeared to me that there was in there evidently an allowance to the Southern Pacific for the origination of the traffic. If it were based strictly upon a cost basis, that the allocation to the Southern Pacific of that traffic would not be quite so large as it is now, but the difference is not great and seemed to me would be fully accounted for by the right of the originating line to have some allowance for origination. As to whether I have made computations to show how the divisions stand, handling the traffic as it is now handled through Roseville: I have not made a computation especially for the

2036 purpose of showing that the saving to both carriers could be greater, because it seemed to me so perfectly obvious that if it could (3695) be done through Alturas it could also be done

through Roseville, that no calculation would be necessary. I think on the pure basis of cost the division between the Southern Pacific and the Union Pacific on traffic handled through Roseville is as it should be. I think it is a reasonable division. At least, I find no reason to think otherwise. I don't profess to be expert on that point, but as regards cost, it seems to me to be a fair division, considering the cost to both carriers of that present haul. It is true in some cases that my cost computations showed that the Union Pacific was now handling some of this traffic at practically a loss.

Exam. ROGERS. If that be true, how can the divisions be proper?

A. Well, it is only because that same division is applied to the entire lumber traffic. Now, when it comes to those light loads in which, as from Klamath Falls, for example, the Southern Pacific has a considerably shorter haul, if it were applied to that alone I would say the division was not a fair one; but upon those lighter loads neither carrier makes anything like a compensatory earning, and it is true, as regards (3696) that, I don't think the Union Pacific gets enough. But I took it for granted that the rates must necessarily, and divisions, be the same for the two kinds of lumber. I was speaking of it in consideration of all the lumber traffic handled in that way.

It is of course true, taking the Union Pacific, if they are losing money now I might determine from my study that they would afterward make more money than they do now. That would not mean much. But, as regards that, I should have to anticipate somewhat some things I expect to be called on to state later, in regard to what Mr. Burckhalter has said in regard to this empty car movement. As he describes that empty car movement, it would
2037 tend relatively to improve the Union Pacific's situation in that present division. How much I am unable to say until I can figure it out in some degree, but, as he describes that, with the Southern (3697) under the necessity of furnishing all those empty cars and the Union Pacific with no requirement for hauling empty cars back, it would have its situation relatively improved in that division. I would be inclined to question, under that condition, whether the Southern Pacific was getting a fair share of the division. That would be the only question I would raise. Supposing it is true that the Southern Pacific is not getting a fair shake out of the divisions now, my computation is based on the theory after this method went in they would make more money than they do now. My computations are based upon what they would earn by the Alturas route, on the assumption that the division of rates would remain the same, and that the Southern would take to itself the additional saving of its shortened haul.

Cross-examination:

Right in that connection it costs the Union Pacific precisely just as much money to move this traffic if it received it at Ogden from a routing that went (3698) via Alturas as it does now.

Q. And if it is losing money on that traffic now, would you contemplate that the division should be arranged via the Alturas route so it would receive a larger division, the Union Pacific?

A. I haven't gone into that at all. I haven't said that it was losing money, except on some portions of that traffic. And that a minor portion. If it is a practicable thing to make a different division on pine lumber from other lumber, why, I would say that it ought to be done in this case. It would be perfectly fair from a cost standpoint.

2038 Q. Now, your answer with respect to the divisions, that is, that they were perhaps not right and fair under the existing operations through the Roseville gateway, does that apply with respect to the Portland gateway?

A. Well, I was not asked that question. You refer now to this 25–75 division?

Q. Yes.

A. I would say from a cost standpoint that is not a fair division. (3699.)

The Union Pacific gets the worst end of it there; so much the worst that I can't see any object in their attempting to get that traffic under that condition. We give them a better division than that on our proposed cross-State line operation. We show these substantial savings in our computations via the cross-State line from the movement of the existing business from western Oregon. The Southern Pacific can take the western Oregon business on the water grade from Eugene to Portland with less expense than they could to Crescent Lake from Eugene. There wouldn't be just as much of a saving to the Southern Pacific, and just as much profit to them, to turn that business over to the Union Pacific at Portland, as at Crescent Lake. If there was as much profit to the Southern Pacific, then there would not be as much left for the Union Pacific. It costs the Southern Pacific less money to take it to Portland than it does to Crescent Lake. (3700.) On the Crescent Lake operation, or Eugene via Crescent Lake to Omaha, we give them a certain division which is more profitable to them than if it is routed via Roseville. The Southern Pacific could make a more profitable division for both carriers by routing the business through Portland than they make by routing it through Roseville. But the cost of haul direct from Portland to Omaha by the Union Pacific is not such as to permit that division.

2039 Q. That is, it is not such as to permit of the Crescent Lake division?

A. Except as it comes right at Portland. There is some of that at Portland which, it is true, could more economically to both carriers be sent through Portland.

Q. That is now routed through Roseville?

A. Yes.

Q. Is that true as to business in Washington County and Tillamook County?

A. Whatever is to move through Portland. (3701.) I mean, of course, within the suburbs that are practically within Portland; I don't mean merely within the city limits. By Portland I mean the Willsburg junction and Brooklyn yards; any of those junctions here by which it would move.

Q. And with respect to all that traffic, the Columbia River gateway is admittedly the best route of all of them, wouldn't it be?

A. Yes; for some of that. Yes; for that traffic that would be true. Under my proposal here I would take that traffic the cross-State line. That is the way it has been figured here, because it is moving now through Roseville.

The division I give via Crescent Lake is stated on page 117 as applied after the Alturas line is in operation, 27 per cent to the Southern Pacific, from Eugene. (3702.) That is to be delievered to the O.-W. R. & N. at Crescent Lake. On page 113 I say 17 per cent. That is on the assumption that a different rate division will be made until the Alturas line is in operation.

Exam. ROGERS. Have you given a less division by Roseville than you do via Alturas to the Southern Pacific?

A. I haven't proposed anything at all via the Alturas line in this.

Exam. ROGERS. I thought you said 27 per cent after the Alturas line is in operation?

2040 The WITNESS. I have prepared here two sets of conditions, one on the supposition that the cross-State line will be built first and that for a period of three years it should be allotted a higher division, a division as compared with Roseville conditions; then that if that time, or later, the Southern Pacific built the Alturas line, that it should then be considered as the route for the Southern Pacific to haul, and it should be protected in the earnings that it might make (3703) on the same traffic through Alturas. That would call for a different set of divisions, and that is the reason for the 17 per cent in the one case and the 27 per cent in the other. It is true the Union Pacific would do the same thing in both cases. It is my recollection of the figures that it costs more to haul a car from Eugene to Crescent Lake than to Portland. I think that is correct. I think I can find the figures for you. In my Exhibit 36 I gave the cost for haul from Eugene to Portland by the Southern Pacific as $33.28. On page 75 of Exhibit 16 I give the cost from Eugene to Crescent Lake as $48.54. By the haul to Portland the Southern Pacific would save about $15.16. On page 117 I give the Southern Pacific 27 per cent with the interchange at Crescent Lake. With a freight charge that is $437.50. Now that is 2 per cent more than they get now for the Portland interchange (3704), they get 25 per cent, that is correct. In other words, it costs them $15.16 more to haul it to Crescent Lake; they could now even afford to haul it to Portland for the 25 per cent and still save $6.00 or $7.00 on the

operation for each car. They could when you get it up to 27 per cent. If that division remained, that is true.

2041 Q. Well, if economy in operation, the saving of expenses, is the important consideration here, why is there no study made on the existing route via Portland, and why is all this business, Linn County and north, diverted to the cross-State line?

A. Because it moves past that now. It moves past that point of junction under present conditions.

If the Crescent Lake line is made more attractive by division of rates that protect the Southern Pacific so it earns as much on a short haul as it would on a long one, I think it would be much more desirable than the Portland junction. I say now you are allowing the Southern Pacific too much money to Portland, and you are not allowing the Union enough to make it an object to get it.

I didn't hear Mr. Lounsbury's testimony, where he (3705) is chasing these men around personally in the Willamette Valley in an endeavor to get a car here and there. I can't see why he should want it. Certainly we are trying to find some way to support the cross-State line. The cross-State line is not the better route to move some of the traffic than the Portland route; that is true. But it is actually moving the other way. I have made the assumption that the Southern would hold onto it, at least that far, and there was no particular reason in economics to call for it otherwise. It is true some of it could be sent the other way to advantage.

Exam. ROGERS. Let's take the Southern Pacific's standpoint alone; is there any better reason, from their viewpoint, from their pocketbook, in turning it over at Crescent Lake than in turning it over at Portland?

A. For the greater part of the traffic there is, because that is the economic route. Take it from Eugene as a center, its economic route is to send it across the Crane line and not through Portland, but for some of this right close to Portland that is not true. (3706.)

I said that it cost $33.38 to move that car to Portland from Eugene, whereas it cost the Southern Pacific $48.54 to move it up to Crescent Lake. All of this western Oregon business is eastbound,

2042 that I am discussing here through these gateways. (3707.) It is correct that it costs $33.38 to move the business to Portland from Eugene, that it costs $48.54 to move it from Eugene to Crescent Lake.

Q. Now how can it be, then, that for the bulk of the traffic in western Oregon, as far as that part of the movement is concerned, how can it be more economical for the Southern Pacific to deliver it to the Union Pacific at Crescent Lake than at Portland?

A. I haven't said that that was more economical as regards that particular haul. Of course it costs them less to haul it to Portland. That is not the whole question by any means. When it is up at Crescent Lake it costs the Union Pacific considerably less to haul it the remaining distance than it does if it is at Portland.

Q. Now what reason obtains for a division of 27 per cent to the Southern Pacific after the Alturas line is built as compared with 17 per cent under existing conditions, where it moves through Roseville? (3708.)

A. Because by that saving there, which is accomplished by the cross-State line as compared to the Roseville line, would be due to the Union Pacific's investment. Under the division as I have worked it out there you will find—I can't at the moment refer you to the page, but you will find it shown that the Southern Pacific on that same traffic would have a substantial increase in its earnings over what it would get if it hauled it through Roseville, and that without expending any money whatever. That seems to me is a very liberal arrangement for the Southern Pacific, that it might profit through the building of the cross-State line without having spent any money on it.

I think the Alturas line ought to be built, and I think the Southern Pacific should be encouraged to build it by the promise
2043 of a better division when it is built. Or, if it built first, I think it will be necessary to recognize it, of course.

The question on what authority, or what basis or assumption I assume that any order can be made diverting any of this business to the cross-State line, assuming that the Alturas line is built, is a legal question. I have been informed by the attorneys here present, that it can be done. I have no opinion on the subject. (3709.) As far as I see it, if it can't be done, why, this whole study or discussion won't fit the situation.

And under existing conditions if the Portland route is used substantial economies could be effected, and each railroad interested could make increased profit from existing operation. I take it for granted that since this situation has existed for a long time, there must be some other reasons which have prevented that being done, and presumably those conditions would continue to exist. I don't know what they are.

Q. Now for what commodities would you consider the existing lines and routes unreasonable as compared with the proposed cross-State line? And by existing routes, I am assuming that the Alturas line is a constructed route, is being constructed. When I say the "existing routes," I am assuming the Alturas line in connection with the Central Pacific and Ogden, and the Columbia route of the Oregon-Washington Railroad & Navigation Company. Now for what commodities in western Oregon do you consider those routes unreasonable?

A. I haven't said they were unreasonable for any commodity.

Q. In distance or circuity, as compared with the cross-State line?

A. I haven't expressed an opinion on that. I have simply shown what the cross-State line would save in the handling of (3710) certain commodities.

2044 Q. Well, do you consider them circuitous?

A. I don't know how that is to be defined as it is used in rate matters. Certainly those routes are longer. That is all I know.

Exam. ROGERS. The term is "unreasonably longer," isn't it?

Mr. SPENCER. Yes.

Q. Are either of them unreasonably long in your observation and experience? You have been working on railroads, and as a railroad expert from Canada to Mexico you can say whether the Alturas line, in connection with the Southern Pacific and the Union Pacific via Ogden, is an unreasonably circuitous route as compared with the cross-State line proposed?

A. Well, I can only think of that in the terms that I am accustomed to. I don't think it would be unduly circuitous, unreasonably circuitous, so long as the saving to be effected by the construction of a shorter line would not support that line; but I think it would be unreasonably circuitous whenever the conditions would reach the point that a saving could be made on the same traffic that would justify the construction of another line. I don't understand that is the kind of a definition you have in mind when you use the term in making rates.

Q. No. Well, when you proceed to dismember the traffic structure of a railroad, your cost computations on the new line to (3711) which you divert it can't follow? That is, you won't have the same operating success on a new line, particularly one that does not start from the owner's terminal, as you would under an old operated railroad that is a going concern, like the Union Pacific system, would you?

A. Well, of course there would be some difficulties connected with a new line. But this new line, with the traffic ready-made for it, would escape most of those difficulties.

2045 I am not proposing to dismember any traffic structure; I am proposing a division there under which both carriers would be better off. That is not dismemberment.

Q. Now I want to ask you in that connection whether the O.-W. R. & N. is not pretty effectively dismembered if it is stripped of the southern Idaho traffic that is available for it westbound?

A. I don't understand we have stripped it of any—contemplate stripping it of any of any consequence whatever. It might be a small amount would be diverted in that direction. I think it would.

In Exhibit 107 I take practically all of that business that is contiguous right now to the branch and main lines of the Oregon Short Line (3712) in southwestern Idaho that I am figuring these earnings on. To whatever extent it may go west, it is true it is now enjoyed by the Oregon-Washington Railroad & Navigation Company. My understanding of the testimony of the Idaho witnesses was that this would all go to California. I don't understand from them that it is now going over the O.-W. R. & N. I can't answer as to that. I am not positive. But that was not my understanding. Assuming that it is going over the O.-W. R. & N. and a traffic analysis of the southern Idaho business shows that it goes to Oregon and Washington

points, and it is then diverted to San Francisco, the O.-W. R. & N. would suffer for the traffic westbound—to whatever extent that is true, of course, it would be taken away from the O.-W. R. & N.

Q. Now the O.-W. R. & N. needs traffic, doesn't it?

A. All railroads need it.

Q. Well, I know, but from a comparative standpoint, you know (3713) that the O.-W. R. & N., for a number of years, has been unable to earn its fixed charges, notwithstanding large and generous divisions accorded to it by the other system lines?

2046 A. I do not know about that.

Q. You have analyzed these statements here for years, haven't you?

A. Yes; but I don't know whether they give that division of traffic as the way you speak of it. I don't understand they do—I mean divisions of revenues.

Q. Well, assuming that they do and that the divisions are abnormally large and prejudicial, maybe, to the Short Line and the Union Pacific, but in any event, with their generous, full divisions the O.-W. R. & N. is not making any money, is it?

A. Well, I don't understand that is the fact. The only knowledge I have of it is in the reports made to the public service commission of this State. My understanding of those reports is that the revenues there attributed to these lines is on a straight mileage basis, without any regard to the generous divisions you speak of. I know nothing of those latter.

Q. I wish you would look at this chart, Exhibit 89, reflecting the divisions received by the O.-W. R. & N. from the other system units, revenue divides between the Oregon Short Line on any traffic originating or received on the O.-W. R. & N., 53 per cent, whereas the mileage divide is 47 per cent.

A. Isn't that 44? (3714.)

Q. No; wait a minute; 44. That is right. That is Salt Lake. And the other division with the Short Line, Union Pacific, and the O.-W. R. & N. divides 35 to the O.-W. R. & N.; 27 per cent to the Short Line, and 38 per cent to the Union Pacific. Does that appear to you that the O.-W. R. & N. is getting pretty large divisions there?

A. Why, offhand I should say those look like reasonable divisions. But are the revenues reported to the public service commission of this State based upon such divisions?

Q. They certainly are.

2047 A. I don't understand that to be the fact, never have understood it. I suppose they were always based upon straight mileage within the State.

Mr. ELLIS. I think the reports so indicate, that they are.

Q. (By Mr. SPENCER.) Does that make any difference in your calculations, if you are wrong on that?

A. Not at all. Whether the O.-W. R. & N. is making more money or less money, it is entitled to its traffic within reason and would lose by the diversion of it, of course.

Q. Well, it is really an emergency, as far as the O.-W. R. & N. system is concerned, isn't it?

A. Well, I am not aware of that.

Q. Well, if it has run $7,000,000 or $8,000,000 into a deficit, with divisions like that over a period of the last 7 or 8 years—— (3715.)

A. Well, there seems to be a difference of opinion between you and Mr. Ellis, who, I think, should know as regards the revenues reported to the commission of this State.

Q. You think he ought to know?

A. He says you are wrong in regard to that, and he is in accordance with what I have always understood to be the method of the showing.

Q. Well, if the exhibits in this case show that the O.-W. R. & N. receives those divisions reflected by Exhibit 89, contemplating now its entire operation and not its operation in Oregon alone, it receives those divisions and receives the earnings local to its lines, and the reports to the commission, State and interstate, by the Oregon-Washington Railroad & Navigation Company are accordingly, and they as well as its general balance sheet show that it has accumulated a deficit from operations in the last 6 or 7 years, or 7 or 8 years, of $8,000,000 or $9,000,000, or $7,000,000 or $8,000,000, it is not making a very good showing, is it?

A. It is not.

2048 Q. You know that is its condition, don't you, Mr. Newell?

A. I know that the reports to the public service commission indicate such a condition. (3716.)

I have taken all of the traffic that these different witnesses have brought in that is originated in western Oregon, southwestern Idaho, southeastern Oregon, Alkali Lake and all, and applied these rates to it, and then presented a summary in my Exhibit 107 that will show, before the Alturas line, a profit and rate of return on the first year of the cross-State line, of 17 per cent. I don't suppose there is any railroad in the western world that has ever made such showing as that. And the second year I show 19 per cent; the third 21 per cent. I have done that on the assumption that this traffic these gentlemen have pointed out to me is going to be available and move over that line.

Q. Now you know it is not going to move, from your own observation, experience, and knowledge in this territory as a railroad man, don't you? (3717.)

A. I don't know anything of the sort.

Q. Didn't you in the last case on this cross-State line take tonnage from a young man down here at the university, of 600,000 tons of hay and apply figures to it the same as you are applying here now?

A. I applied some figures to it, but that matter came to me in the midst of the hearing itself. I had no time to give it any consideration at all as to whether——

Q. Well, I called it to your attention at the time, didn't I?

A. And I answered your questions.

Q. And you said that you didn't see any reason why it would not move, didn't you?

A. I don't recall in regard to that.

Q. Well, you knew it would not move, didn't you?

A. I didn't know that. I had no opportunity——

2049 Q. You know it won't in this case, don't you.

A. I had no opportunity to make any study of it at that time. I have been informed that since that time the hay situation has changed considerably, so that whatever was true at that time would probably be not true now. But that is all second-hand information.

Q. Yes; now in this very tabulation that you have made here, based on Wiggins' testimony and the testimony of these other witnesses, you are moving hay from Southern Idaho via the Crescent Lake Junction to Los Angeles. Now do you think there (3718) is going to a ton of it move that way?

A. That is not true. There is no statement that it is moving to Los Angeles, or will move to Los Angeles.

Q. Why, I understood you to embrace in this Mr. Wiggins' Exhibit 104, 24 cars of hay from Boise, Idaho, 1,254.7 miles to Los Angeles via Crescent?

A. He has such figures there used in his derivation of a ton-mile rate of earnings proper to be attributed to a haul across the cross-State line. Now he and I discussed these matters beforehand, and I know, independent of what he said on the stand—I could not follow all of those questions, but I know that he was using that solely for the purpose of obtaining a suitable ton-mile earning rate to be applied and had no reference at all to the question whether or not it would actually move to Los Angeles.

Q. Well, what object did he have in obtaining a ton-mile rate on traffic that he knew would never move?

A. He would not know, as a matter of course, that none of it would move. The statement was made by these Idaho witnesses that that tonnage would go to California points, stating expressly, I believe, that it would go to San Francisco and that territory. I do not know whether they said it would go to Los Angeles. In

2050 our consideration of that, because I was consulted by Mr. Wiggins in these matters, he had before him the problem of determining a ton-mile rate, a rate to be (3719) applied. He took the intermediate rate existing to San Francisco and a rate that would exist, or, I believe, does exist, to Los Angeles, on the longer distance, and out of the mean of those two he obtained a ton-mile rate which would certainly be not any higher than would be determined by actual movements of hay to whatever points it might go to.

The statements in Exhibit 104 giving point of origin, destination and number of tons, number of cars, and rates per 100 pounds, mean

nothing as to the destination of the traffic. They mean a great deal as to the manner in which Mr. Wiggins determined a proper ton-mile rate of earnings to be applied. That is their sole purpose, and he so testified.

Mr. Wiggins prepared an exhibit splitting everything fifty-fifty, grain, hay, apples, and all these other commodities so that he might obtain an average figure of the longest haul possible in the intent of the Idaho witnesses, and a shorter haul, so that the mean of the two would be at least as long as could fairly be attributed to it. He does not summarize it here and move it to Los Angeles and San Francisco; he points out what it would cost per ton-mile, or what it would earn per ton-mile if it did move to those places. (3720.) I certainly do not know where it moves. I think he said he does not, either.

Exam. ROGERS. This exhibit assumes that it is going to move to certain destinations, doesn't it?

A. I don't understand the exhibit to be intended for that purpose. You are speaking of Mr. Wiggins' exhibit?

Exam. ROGERS. Yes.

A. My understanding of those showings of those destinations is purely for the purpose of obtaining a suitable ton-mile earning rate.

2051 Exam. ROGERS. But it assumes it will move across the cross-State line?

A. Yes; because it would have to do that according to the statement of the Idaho witnesses, to reach any of those California points they had in mind. If it had been assumed that it would all go to San Francisco, there would have been obtained a higher rate of earning per ton mile than we used.

Comr. MCMANAMY. If it actually moves across the cross-State line it does not make any difference what destination it goes to, so far as the application of the earnings to the cross-State line are concerned?

A. That is correct. (3721.)

Exam. ROGERS. Well, it might make a difference if Los Angeles traffic is going to move across the cross-State line or is going down over the Los Angeles & Salt Lake?

A. That is perfectly true, but that does not necessarily enter into it. Take that hay. I think it is 48 cars, is it not? I haven't the exhibit before me—a small number of cars. The Idaho witnesses said that hay would go to California points.

That was their testimony, that it would use the cross-State line. That is as far as Mr. Wiggins and I had any occasion to know about. We were simply looking for a proper rate of earning to apply to it.

Turning to my Exhibit 107, page 5, I take those same commodities, the same number of cars, that Mr. Wiggins analyzes and discusses in such great detail in his Exhibit 104, and I show the gross earn-

ing of $158,531, the same as he shows. Those figures are taken from his exhibit. I follow his exhibits right through. (3722.) He finds for the haul to Los Angeles 1.12 and some other figures for the rate per ton mile under the existing rate; to San Francisco
1.61. He applies the mean to those two to the 189 miles and
2052 the 705 tons which the Idaho witnesses said would move across the cross-State line, and from that obtains the figure of $1,814.00 shown as the revenue to the cross-State line.

Now it has no reference at all to whether it is actually hauled to San Francisco, Los Angeles, or any other California point.

I don't know what Idaho witnesses said it was going to move via the cross-State line. I didn't hear the Idaho witnesses. I was told that was their testimony. (3723.)

Exam. ROGER. As I understand, Mr. Newell, your thought is this: That if it is certain, in the first place, that the traffic is going to move across the cross-State line, it does not make much difference whether it is destined to San Francisco or to Los Angeles?

A. Not a particle.

Exam. ROGERS. If it is going to move across the cross-State line?

A. Yes; if it is going to move.

Exam. ROGERS. The trouble is to know whether the Los Angeles traffic is going to move across the cross-State line, in the first place, isn't it?

A. I think that is doubtful, but I say these witnesses——

Exam. ROGERS. You have started with the assumption it is going to move across the cross-State line because these other witnesses have said so?

A. Yes; but I don't understand they said it would move across the cross-State line if it were going to Los Angeles.

Exam. ROGERS. Well, that would be——

A. But they do say that many cars will move over the cross-State line.

Comr. MCMANAMY. And except for the determination of the rate per ton-mile Los Angeles might be left out of the computation entirely?

A. Entirely; yes. (3724.)

2053 And I took the mean of the Los Angeles rate, that is the rate per ton mile to be realized in the haul to Los Angeles, and the rate that would be realized to San Francisco, and applied the average to the whole tonnage. That does not assume that half of it is going to Los Angeles and half to San Francisco. As to why I applied that average rate then, it merely assumes that a mean of those two rates is a fair rate per ton mile to attribute to that cross-State haul, even if it is lower than the present rate to San Francisco, because for this purpose quite obviously it would be to our interest to make this as high as we could, if we wanted to present a false statement. But we wanted to present a conservative statement and we included Los Angeles from that standpoint.

I said, in answer to the commissioner's question, that as far as this computation was concerned it would not make any difference whether it was destined to San Francisco or Los Angeles so long as it was going to California; that is the question (3725) we are interested in—as long as it is going to cross the cross-State line. It might make a difference, in the first place, if it was going to Los Angeles, as to whether it would go across the cross-State line. But I must assume that the Idaho witnesses had taken that into account and didn't put into their calculations anything that was doubtful in that respect. I can't answer for them. That is the presumption I started with—that what they said would move across the cross-State line would move that way.

On page 2 of my Exhibit 107 I mention an exhibit by Mr. Wiggins showing gross earnings of $6,302.00. (3726.) The exhibit number there was left blank. To make that complete 105 should be inserted. That is Mr. Wiggin's Exhibit 105. Three lines below, on page 2 of my Exhibit 107, in which the exhibit number is left blank, the exhibit number is 105; also the last line on page 2. Three times on page 3 of my Exhibit No. 107, exhibits are referred to, with the exhibit number blank, and in each instance 105 should be
2054 inserted. (3727.) On page 5 of my Exhibit 107, Newton's Exhibit — is erroneously referred to. That should be Spangler's Exhibit 23 and in the last line at the bottom Exhibit 105 again, page 5.

Q. (By Mr. SPENCER.) Now right there, Mr. Newell, you say these witnesses have represented that is going to California; wasn't the representation that that is westbound business that might go via the proposed cross-State line? If it would go by the proposed cross-State line it would go by the existing routes, wouldn't it, if it was destined to Portland, or Seattle—Spangler's Exhibit 23?

A. Yes. But this was represented as commodities that would go to California.

Q. By whom?

A. By the Spangler exhibit.

Q. I wish you would look at Spangler's exhibit and tell me where, point out on that Spangler exhibit where he represents it is going to California, or any part of it.

A. I did not myself study the exhibit. (3728.)

Exam. ROGERS. I would like also to ask if you took into consideration the oral testimony, or just took it from the exhibits?

A. We had only the exhibits. We were not able to be here and hear the testimony of the witnesses; at least, I was not, and I know Mr. Wiggins was not most of the time.

Exam. ROGERS. Well, have you reviewed the record?

A. Well, these matters I myself have got from Mr. Wiggins. Now at the time we were making this up it wasn't certain which of us was going on the stand first, and I put these references in, as he told me they would be.

Exam. ROGERS. What I am after is, did you or Mr. Wiggins examine the record before you made your computation, or did you just take the exhibits of the other witnesses?

A. You will have to ask Mr. Wiggins that, because he did that and told me the result. (3729.)

2055 Q. Well, you were working there together, were you not?

A. Yes; but he was——

Q. And you know whether he was studying this manuscript and record that came out, or whether he was using the exhibits?

A. Why, as far as I know, I don't know if he was using anything but the exhibits, but I can't say that he did not use the record, because we were not working together nearly all the time.

Q. As far as you were concerned, you used the exhibits; is that right?

A. As far as I am concerned I used what Mr. Wiggins told me the exhibits stated.

Q. He had the exhibits there?

A. He had the copies of the exhibits, yes.

Q. Do you find any reference to California destinations in Spangler's Exhibit 23?

Exam. ROGERS. Let us ask Mr. Wiggins about that and get it straight, Mr. Spencer. (3730.)

Mr. SPENCER. All right.

Exam. ROGERS. Mr. Wiggins, when you made up your tabulation did you consider the exhibits of the Idaho witnesses only, and Mr. Teutsch's exhibits only, or did you consider the daily transcript of the record along with the exhibits?

Mr. WIGGINS. I haven't had that, but we checked them up and arrived at them in the office down here in connection with the witnesses and with Mr. Thompson, of the Idaho commission.

Exam. ROGERS. Yes, but you have not gone over the record in connection with the exhibits?

A. I have not gone over the transcript in connection with the exhibit. (3731.)

2056 On page 7 of my Exhibit 107 I refer to an exhibit of Mr. Newton but left the exhibit number blank. That should be Newton's Exhibit 7.

Q. (By Mr. SPENCER.) Well, you are testifying with reference to these exhibits as though you had reviewed them and are incorporating them as a basis for your tabulations here. Now did you use those exhibits, or did you get it from Mr. Wiggins?

A. Mr. Wiggins gave me the figures and told me they were taken from these exhibits. I did not review the exhibits myself. At the time Mr. Wiggins and I were making this we didn't have the numbered copies before us. (3732.)

On page 8 of my Exhibit 107, near the bottom of the page where reference is made to "Mr. Wiggins' Exhibit—," that should be Wiggins' Exhibit 28.

Q. (By Mr. SPENCER.) Now, in this last page you are making this computation upon the assumption that all this western Oregon business, southwestern Idaho business and eastern Oregon business is going to move across this line; is that right?

A. Which statement do you refer to?

Q. In your summary on Table 20, on page 7.

A. All the traffic which has been referred to, yes, is going to move across the cross-State line.

Q. If the southwestern Idaho business does not go via that line, or if the western Oregon business does not go, why your estimates would fail?

A. Certainly.

Q. Now you say if there be no compulsory—on page 8 you say, "If there be no compulsory interchange between the carriers at Crescent Lake, a considerable part of the traffic which I have claimed for the new line would be subject to competition between the carriers." I understand you don't claim this yourself as being traffic for the cross-State line?

2057 A. Well, only in the manner indicated.

Q. Yes.

A. That is, based on the statements of the witnesses. (3733.)

Q. Yes. Now you say, "a considerable part of the traffic which I have claimed for the new line would be subject to competition between the carriers." Now what carriers would be competing for western Oregon traffic?

A. The Southern and the Union.

Q. Where would the Great Northern be?

A. Well, they would be there also, as they are now.

Q. The Northern Pacific?

A. Yes.

They are in there now, with their own rails, but their competition would be whatever it is now. The Union Pacific would be a competitor in the Southern Pacific territory. I don't mean that competition in the sense it is ordinarily used as competing railroads serving a territory—it would not be serving a territory. They would not have any more competitive service in western Oregon than they have got now via Portland, but they attempt, I understand, to get some of that traffic now. (3734.)

2058 Redirect examination:

Q. (By Mr. MCCULLOCH.) Refer to Exhibit 106—no, Exhibit 104, of Mr. Wiggins, please. Just referring to the item of hay alone, now suppose in order to obtain an average rate in cents per ton mile to apply to the tonnage moving over the cross-State line, Mr. Wiggins had assumed only San Francisco as a destination, what effect would that have had on the computations and figures he has shown in the last column of his exhibit, and what corresponding effect would that have made on the calculations and results you reached in your Exhibit 107?

A. He would have had a higher rate per ton mile of about, as I recall the figures, one-seventh, would have increased the gross earnings by about that amount of money and the corresponding increase in gross earnings would have been made in the net earnings which I used, so that I would have had larger net earnings to attribute to that line.

If there was any possible element of unfairness in his assumption, or his use of a ton-mile revenue to Los Angeles in the case of all of these commodities, for the purpose of ascertaining an average ton-mile revenue to apply to the tonnage moving over the cross-State line—if there was (3735) an element of unfairness in that, it was not unfairness to the defendants in this case.

Q. Now you were asked some questions about divisions of these joint rates on lumber to eastern territories in comparison with the direct costs of performing the haul to the two carriers that divided the joint rate. Now I think there has been testimony in this case, or there will be, that the rates on lumber from territory west of the Cascade Mountains in Oregon and Washington over a vary large geographical area are blanketed to eastern destinations, like Omaha and Chicago. If the rates are blanketed, if the joint rates are blanketed from such a large area of production and of origin,
2059 would it be practicable, in your opinion, for the railroads to use in dividing that blanketed joint rate anything but a standard or blanket division?

A. Well, that is rather out of the field that I know about. I don't see how else it could be done, except that——

Q. What I was getting at was this: If the rates were blanketed it would seem to be necessary that the division should be standard and uniform, whether the traffic to Omaha or Chicago originated in northern Washington or southern Oregon or Portland or Seattle or Eugene. Now can the direct cost of hauling lumber from all the points of origin west of the Cascade Mountains in Washington and in Oregon to an eastern destination (3736) like Omaha or Chicago, be blanketed? Would there be such a thing as getting a blanket direct cost of haul?

A. No. The costs would be——

Q. From all different origins?

A. The costs would vary with the location.

Q. Would you say, then, Mr. Newell, that it would be a feasible or practicable thing to attempt to maintain a definite relationship between the divisions of joint rates on lumber from all this coast group territory in Oregon and Washington to eastern destinations, on the one hand, and the direct cost of hauling from all of those points of origin to any particular destination in the East?

A. I would not think it would be practicable. I think any arrangement that would be made would at times be unjust to one carrier, and if it were an absolutely unjust division it would be at other times unjust to the other carrier. That factor would have to be taken into account in determining what the divisions should be.

Q. Would it follow, then, Mr. Newell, in your judgment, that a division which, from the standpoint of direct cost of haul to the carriers, involved from Seattle to Omaha on fir lumber, might
2060 not seem equally reasonable and fair, so far as that particular relationship is concerned, if the lumber originated at Eugene or at Klamath Falls and was destined to Omaha? (3737.)

A. There would undoubtedly be differences in those different places. It would not apply with exact equality throughout.

I do not know whether the present division is blanketed all over this territory now, whether the blanket rate applies.

Recross-examination:

Q. (By Mr. Dey.) Just one question. This rate that you have taken to San Francisco and Los Angeles to arrive at a mean here of rate per ton mile, involves $14.00 a ton, as I understand it, on hay. Now then, instead of taking the San Francisco rate and the Los Angeles rate, why didn't you take the hay rates that apply in Oregon, inasmuch as the testimony in this case is that most of this hay, if it is going to move anywhere, is going to move to western Oregon?

A. I don't understand the latter to be the case. This was represented to me from the exhibits and from the statements of the witnesses, that this was going to California. There is nothing on the Spangler exhibit to indicate that. (3738.)

2061 C. E. Day was thereupon produced as a witness on behalf of defendants, and, having been first duly sworn, testified as follows:

Direct examination:

I am office engineer on the staff of the general manager, the Southern Pacific Company, Pacific lines. I finished up my college work in 1905, and I have been working at engineering since that time. I entered the service of the Southern Pacific in 1905, in the engineering department. My employment has not been continuous. Until 1920 I was in the engineering department. From about 1912 I was in the chief engineer's office, and in 1920 I went to China and was there three years, and I returned then to the Southern Pacific. (3740.) I returned to the chief engineer's office in 1923, and then about two years ago I was transferred to the general manager's office. My present duties deal with matters that pertain to the economics of railway operations. My duties under Mr. Hood, the late chief engineer, was related to the economics of railway location and construction, largely. In my present work I make studies of the economics or problems that relate to various phases of operations.

I have made a hurried examination of Exhibit 16 in this case, being a cost study by J. P. Newell, and have made some observations. Generally speaking, that study does not go into the same refinement that I am accustomed to use in similar work. With respect to the features out of line with my idea (3741: Exhibit No. 16, by Wit-

ness J. P. Newell, purports to show that both Southern Pacific and Union Pacific are overlooking an opportunity of making the very profitable investment which is afforded by the proposed cross-State line from Crescent Lake to Eugene.

2062 The conclusions arrived at by Mr. Newell in the application of his cost data to traffic which he proposes to divert from the present routing, or from Southern Pacific lines to Union Pacific lines, is an exaggerated conclusion.

I have not had an opportunity, as stated before, to fully analyze his studies, and have therefore only observed certain important defects.

Mr. Newell's conclusions are over-stated for several reasons, some of the most important ones attached to his treatment of the following:

(a) Division of expenses into direct and indirect;

(b) Fundamental errors in method of deducing cost data; and

(c) Application of average results to specific traffic that does not conform to the average.

These criticisms are more fully explained in the following observations. (3742.)

Referring now to Exhibit 16, Table I, page 26, Mr. Newell sets up a division of the freight proportion of operating expenses into two parts, the first being what he calls direct, and the second part indirect.

The indirect proportion is cast out, so far as this study is concerned. The direct he uses for obtaining his cost data. By having a large percentage of expense retained in the direct proportion he obtains a large unit cost.

Now, the direct expenses as applied by Mr. Newell should reflect only the cost that would be saved by the Southern Pacific through the diversion of traffic to the Union Pacific on the one hand; and on the other hand, should reflect expenses that would be added by the Union Pacific on account of the same traffic being on its line.

2063 Not all of the expenses that attach directly to the movement of trains, even, fluctuate with the traffic density. For example, trainmen's wages, even, do not directly vary with the traffic. There always exists, on an operated railroad, times when increase in traffic will have no effect on wages (3743) paid to trainmen. The average direct cost in this limited sense is always less for added traffic than one hundred per cent of the average cost; and the percentage decreases as the average traffic density decreases.

Mr. Newell has recognized this in his treatment of branch line haul as to certain items, but has not given it the consideration he should in main line haul.

These observations about to be made are directed to the percentages of direct expenses as indicated by the simultaneous fluctuation of the traffic and the fluctuations in cost; except, maintenance of way expenses have not been thus analyzed for the reason that re-

sponses to increased requirements are not immediate, and, therefore, maintenance of way expenses do not lend themselves to this sort of analysis. Also, this analysis has not been extended to all the items of expense because of the limited time at my disposal.

Maintenancy of way expenses have been subjected to very intensive study to determine the allowance for increased use. First, when the United States Railway Administration turned railroads over to the owners, a study was made to adjust for the increased use of property during the war period. This study resulted in a schedule of percentages for each item of expense under this heading. Later, the committee on economics of railway operation of the A. R. E. A. adopted this same schedule in Bulletin 274, year 1925, as the proper measure of increased (3744) use.

2064 I have applied this schedule to the items of expense in Mr. Newell's Table I in Exhibit 16, and find that the amount affected by use to be $752,703.00. Mr. Newell's estimate amounted to $1,021,077.00, or 35.6 per cent more than that recommended by the A. R. E. A.

It is difficult to see how Mr. Newell could reason that the expense should be so high in certain items. Superintendence he divides on basis of all other accounts and thus assumes that superintendence belongs as much to the indirect as to the direct expense.

Since indirect expenses are assumed not to vary, it is reasonable to assume that correspondingly his supervision should not vary on this account.

Mr. Newell assumes 50 per cent variable whereas the A. R. E. A. assumes 20 per cent variable. I would agree with the twenty per cent, approximately.

Mr. Newell assumes shops, enginehouse, and water stations as 80 per cent; the committee assumes 10 per cent. The point is, whether I agree with it or not, there is one body of experts says a certain item should be 10 per cent, and Mr. Newell on that same item says it should be 80 per cent. This schedule of percentages was (3745) obtained in committee or group meetings, and it is the composite judgment of their experiences. I am not able to say whether that situation in expert testimony is unusual or not.

As to maintenance of equipment expense, depreciation, and retirement, Mr. Newell assumes 100 per cent direct. It is reasonable to assume that some of the maintenance, depreciation, and retirement of shop and power-plant machinery is uninfluenced by traffic. The A. R. E. A. committee assumes shop machinery at 40 per cent and power-plant machinery at 5 per cent, in contrast to Mr. Newell's assumption of 100 per cent.

2065 Work equipment, in part at least, is used for making repairs due to other causes than to traffic. At least the maintenance of such work equipment is not to be considered direct.

As to traffic expenses: It is common to think of these expenses as being incidental to the origination and delivery of goods. Since there will be no change in this respect, on diverted traffic, and it is

only a matter of routing same traffic by different routes, the cost of originating traffic by the Southern Pacific should be about the same in either case (3746), and therefore it does not matter much what percentage is taken as direct in this particular.

As to general expenses: Mr. Newell has divided the general expenses between direct and indirect in the proportion that all other expenses are direct or indirect. This assumes that every change in the cost will be reflected by a similar change in the cost of general expenses.

When it is realized that general expenses cover such items as valuation, pensions, legal, and the like, it is difficult to see how they can be made to vary in the direct ratio assumed by Mr. Newell. I have not made a study to determine what percentage is direct in fact.

As to transportation expenses: I have made a more careful study of these expenses, and can not agree with Mr. Newell that 90 per cent of all the transportation expenses are direct and varying in the same ratio as traffic. He assumes that superintendence fluctuates exactly as all other expenses, that is, if any part of the other expenses varies, superintendence varies accordingly.

In order to determine exactly how responsive the cost of superintendence is to changes in traffic density, I have set up the volume of traffic and the cost of superintendence on the main line by months for the year 1927, and by ordinary mathematical rules determined the most probable value of trend in cost as a function of traffic density. (3747.)

2066 I find by this analysis that superintendence is affected by traffic as follows:

Shasta division	4 per cent.
Sacramento division	16 per cent.
Salt Lake division	6 per cent.

as contrasted with Mr. Newell's estimate of 90 per cent.

In a similar treatment of dispatching expense, I find the following percentages affected by traffic:

Shasta division	27 per cent.
Sacramento division	15 per cent.
Salt Lake division	33 per cent.

Mr. Newell assumes 100 per cent in his analysis.

Similarly I find enginehouse expenses to be direct as follows:

Shasta division	6 per cent.
Sacramento division	18 per cent.
Salt Lake division	49 per cent.

Mr. Newell assumes 90 per cent.

Station supplies and expenses, which includes heating, lighting, miscellaneous furnishings, and so forth: I find this has no relation practically to traffic; at least, on two of the divisions studied, I find the cost greater during light traffic periods than during heavy traffic periods.

Mr. Newell assumes 85 per cent as being direct, and, therefore, influenced by traffic. (3748.)

Mr. Newell, in Exhibit 16, Table I, treats telephone and telegraph operation as proportional to all other expenses and is, therefore, made to vary in direct relation as any other expense varies.

I have not had time to make a study of this item; if I did, I feel sure that the result would be found to be a very, very small percentage.

2067 The same is true of other expenses, insurance and injuries to persons, all of which he assumes to vary in a direct relation as all other expenses.

As to train service expense, I have made a similar analysis to see how responsive these costs are to traffic density.

Train service expenses that I refer to include such items as fuel, enginemen's wages, trainmen's wages, train supplies, and locomotive supplies.

I find, as to main line haul, the following results during the year 1927:

The Portland division is 62 per cent; the Shasta division 64 per cent; the Stockton division 92 per cent; the San Joaquin division 91 per cent; and the Salt Lake division 97 per cent.

Sacramento division was not analyzed. If the data were available I would expect that the percentage on the Sacramento division from Gerber to Roseville would approximate that on the (3749) Portland and Shasta divisions; and from Roseville to Sparks, I would expect it to approximate that found on the Salt Lake division.

Mr. Newell has estimated that these expenses on the main line are 100 per cent direct. It is believed that what has been shown herein is sufficient to show that Mr. Newell has grossly overstated the amount of reduction in operating expenses that will be saved to the Southern Pacific on account of the diversion of traffic to another carrier.

Referring now to Mr. Newell's cost data: There seems to be something wrong in the method of Mr. Newell in deducing his cost data. I have not had time to go fully into this, but I have studied his fuel factor. By his method he deduces the cost of fuel to be as follows:

2068 Eugene to Crescent Lake, 1.88 cents per thousand foot tons;

Crescent Lake to Klamath Falls, 1.88 cents per thousand foot tons;

Klamath Falls to Ogden, 1.18 cents per thousand foot tons.

That "cents" shouldn't be on that 1.18. It would be $1.88 per thousand foot tons. $1.88 on the first two and $1.18 on the third one that I gave. That is right. (3750.)

As to whether that is the common basis for basing fuel costs per thousand foot tons: It is a good basis. I use the equivalent of it. I don't put it in that same unit, but I will come to that in a moment.

That is, north of Klamath Falls Mr. Newell uses a cost for fuel that is 70 cents per thousand foot tons, or 60 per cent higher than that which he uses for the territory south of Klamath Falls.

The most modern power owned by the Southern Pacific Company is now being used between Eugene and Klamath Falls, and therefore the cost of fuel consumed should not be any greater than south of Klamath Falls—the amount of fuel should not be any greater.

The Southern Pacific does pay more for fuel at Portland than at California points, the price being about 25 per cent higher; but the change takes place at a point between Eugene and Crescent Lake, and not at Klamath Falls.

The difference in price accounts for 25 per cent of the difference, whereas Mr. Newell has used a difference of 60 per cent. I infer from this that there is a fault in his method of deducing his cost data. (3751.)

Referring now to Mr. Newell's base price of $1.18 and $1.88 per thousand foot tons: Our experience, which I have had many
2069 opportunities to verify, proves that a superheated locomotive of the type generally used on main line through trains consumes 0.34 gallons of fuel oil per horsepower hour. Converting this to the unit of one thousand foot tons and figuring oil at $1.05 per barrel, this amounts to 86 cents per one thousand foot tons; and at $1.30 per barrel amounts to $1.06 per thousand foot tons.

Hence it follows that Mr. Newell's cost for fuel is too great by the following percentages:

Eugene to Crescent Lake, 77 per cent too great.

Crescent Lake to Klamath Falls, 119 per cent too great.

Klamath Falls to Ogden, 37 per cent too great.

As further proof of the inaccuracy of Mr. Newell's figure, I refer to his first computation for the haul Eugene to Crescent Lake, shown on Exhibit 16, page 67.

He shows the resistance cost to amount to $20.61 per car of 56 tons. Of this cost 38 per cent, or $7.80, is represented by the fuel item for hauling a car of 56 tons a distance of 96 miles. This is at the rate of $1.45 per thousand gross ton miles.

A typical performance, as shown by our fuel bureau, indicates (3752) a consumption of 9 gallons per thousand gross ton miles between Eugene and Oakridge and 43 gallons from Oakridge to Crescent Lake, or approximately an average of 23 gallons for the entire distance. At $1.30 per barrel, this amounts to $0.71 per thousand gross ton miles, in comparison with Mr. Newell's estimate of $1.45, which is more than twice as great. Another example of his erroneous data is found in the fuel cost from Roseville to Sparks. His estimate amounts to $6.80 per car, or at the rate of $0.87 per thousand gross ton-miles.

2070 We made eleven test runs without helper, in the month of May, with Southern Pacific type of power, and the average consumption amounted to 24.71 gallons per thousand gross ton miles;

and, at $1.05 per barrel amounts to $.062 per thousand gross ton miles.

Mr. Newell's figure of $.087 is 40 per cent too great.

Doubtless the cost is less in actual practice with the use of helpers and therefore, Mr. Newell's figure is even greater in error than the 40 per cent found by comparing with the performance of a single-engine train in a helper district.

The limited time at my disposal has not permitted me to make further tests of the accuracy of his cost data. (3753.)

C. N. HUGGINS, was thereupon called as a witness on behalf of defendants, and, having first been duly sworn, testified as follows:

Direct examination:

I am vice president of Cobbs & Mitchell Company, manufacturers of lumber. This company carries on its operations in the town known as Valsetz, in the westerly portion of Polk County, Oregon. I am in fact the general manager of this company although we have no office of that type. This mill cuts primarily fir lumber. The capacity of the mill is about 350,000 feet per day; that is two 8-hour shifts. That would be 175,000 on an 8-hour shift. We market this lumber pretty much all over the United States, and also some goes (3755) export. This company has been operating in Oregon since January, 1921. We do not have any tidewater at that mill. We ship by rail for export a certain portion of our lumber, shipping it to Portland. It all leaves the mill by rail.

2071 I went over our shipping records for the last half—about seven months of 1927, taking them just as they came, working backwards until I thought I had gotten far enough. That disclosed that during that period 15 per cent of the total shipments of lumber from the mill came to Portland for water movement.

Our mill is located on the Valley & Siletz Railroad which connects with the Southern Pacific Company at Independence, Oregon. And the same interests that control our lumber company control the Valley & Siletz Railroad. (3756.) We are 41 miles away with our mill from the Southern Pacific. We rely entirely upon the Southern Pacific for our car supply. The location I have stated isn't in the Willamette Valley; it is just over the westerly summit of the Coast Range of mountains at the headwaters of the Siletz River.

As to how we have been routing our lumber that moves to eastern destinations: I perhaps can answer that best by giving the results of this same checking back which I made. I checked back in that way, beginning with December 31st and going backward, without any omissions, for this period of about 7 months, and in that search picking out the competitive eastern points, as I understood them—if I made any mistakes as to competitive points they were immaterial—and it disclosed that we had shipped during that period via the Southern Pacific through Roseville and Ogden to eastern points 473 cars, and via the Portland gateway 115 cars, a percentage of 80 via Ogden and 20 via Portland. (3757.)

In most cases we route our own shipments.

By competitive points I mean points that might have been reached by the Southern Pacific through Roseville or via Portland. By any one of the routes available from Portland—the northern routes or Union Pacific; that is, if it was common to any one of those lines I included it in this list. It included nothing on the northern Pacific at all, nothing on the Union Pacific west of Green
2072 River, and nothing on the Milwaukee on the corresponding area. If it was purely local to that road, I didn't consider it. I tried to select shipments for destinations which might have been routed on equal rates via Portland or via Ogden. The 20 per cent that went through Portland was divided to some extent among all the carriers, the Northern lines, in this country. The junction point of the Valley & Siletz with the Southern Pacific is (3758) Independence, Oregon.

We have the coast basis of rates applicable to our mill, with a one cent arbitrary to eastern points carrying a rate under 51 cents, I believe, is the division. It is intended to cover that differential of one cent on points west of the summit of the Rocky Mountains, broadly speaking.

I am familiar only by hearsay with the proposed cross-State line that is involved in this case, and from having read some in the newspapers. As a shipper of lumber from the Willamette Valley or from western Oregon, I can't say that I have any direct interest in the construction of the line.

Q. Let us assume that it has been built, and the Alturas route (3759) is then open to you, an extra distance of 216 or 217 miles, how would you route your shipments?

A. Conditions remaining as they are—by that I mean that we, billing our lumber largely at the point of delivery, destination, would continue to control the routing—I think it would make no difference. I wouldn't expect to sell an additional carload of lumber.

My company is a member of the West Coast Lumbermen's Association and a member of the Willamette Valley Lumbermen's Association. The Willamette Valley Lumbermen's Association is the one Mr. Magladry is with.

2073 Exam. ROGERS. What did you mean, that the cross-State line wouldn't have any direct interest of yours? Would it have an indirect interest?

A. I had in mind as a possible indirect influence—and that is the only one I had in mind; I was trying to search for some—a demand from the buyer of this lumber so pronounced that we would yield to it and ship via that route. That demand now is nonexistent. In probably 99 per cent of our sales there is no request particularly for any routing, except for the (3760) delivery line when they happen to be on the switches of some delivery line. I, of course, can not answer the question whether there would be a demand to route that way if we had the line. I would hardly think so. I simply point to the record here and show that in the presence of a shorter

line via Portland—I don't know what the difference is, but it is shorter—we have shipped in this manner, 80 per cent via Ogden. We have had requests from one shipper that I can call to mind—not a general request, but in the case of some orders—to ship them via Portland. That is the only one that I recall, possibly ordering, maybe, an average of one or two carloads a month. No reason was given for wanting us to ship it by way of Portland. I don't know whether it was because the shipper wanted quicker delivery, or for some other reason.

Q. The set-up in this case made by the complainant contemplates, (3761) we will assume, that your business which you furnish the Southern Pacific now, and which the other shippers similarly situated furnish the Southern Pacific, in western Oregon, shall be diverted at Crescent Lake and the Southern Pacific Company short-hauled.

Can you see anything in this entire situation that would
2074 lead you as shipper, a substantial shipper, to short-haul the Southern Pacific Company in the future any more than you have in the past, by using the cross-State line?

A. I can see no reason.

Q. I think you stated that the question of the time had not been raised by your trade?

A. I don't recall of any at all.

Q. Well, do you think in your experience, Mr. Huggins, that a difference of 215 or 216 miles in a haul across the continent has anything in it that would act as an inducement to you, or shippers similarly situated, to divert the long-haul from the carrier which serves your mill?

A. I don't think it should have the slightest effect.

The Southern Pacific has never attempted by any undue influence of any kind to interfere with us, or has it ever done so, in the routing of our shipments.

As to whether the lumber industry here in the fir belt in western Oregon has been prosperous for the last few years (3762); I would say generally that at no time since our mill was completed in the fall of 1920 have we ever produced the capacity output of the mill, simply because of our inability to sell it. Our actual productions—the present capacity is 350,000 feet a day or two 8-hour shifts—that is the capacity now, and has been for the past year and a half. In the earlier days we were down—in 1920, when the mill was first put in operation, we calculated the capacity as 250,000 feet per day of two 8-hour shifts. By process of additional facilities the capacity of the mill was gradually increased, and for the past year and a half it has been 350,000 feet per day. I use the two-shift figure because of the fact that we are built and equipped for a two-shift operation. Our dry-kilns take care of two shifts, our logging equipment is for two shifts; our planing mill in one shift takes care of two shifts of sawing.

2075 Our production in 1921, with a capacity as we rated it then of 250,000 feet per day, or, say, 75,000,000 feet a year, was, in round figures, 33,000,000 feet;

In 1922 our production was 36,000,000 feet; in 1923, 56,000,000 feet; in 1924, 52,000,000 feet; in 1925, 49,000,000 feet (3763); in 1926, 62,000,000 feet; and in 1927, 60,000,000 feet.

At no time have we been able to sell all the lumber cut and that we would like to have produced.

My previous answers would indicate that I entirely disagree with now to what we class as the small mills of the Willamette Valley. Valley Association going east would be routed via the cross-State line. I have no judgment as to the mills, or the class of mills which I think Mr. Magladry had in mind in testifying. I am referring now to what we class as the small mills of the Willamette Valley. The major membership in this Willamette Valley Association is now made up of a group of perhaps 25 or more of these so-called small mills. I think he had in his mind—this is only a supposition—that he was speaking for that class of mills, and not for the larger mills, of which ours is one. (3764.) I don't believe I am competent to answer whether there would be a different situation as to small mills and large mills, because I admit that I don't know where they find their business—to what part of the country they are shipping, and what class of customers. They sell to the brokers and wholesalers.

2076 Cross-examination:

I attended the meeting of the board of directors, of which I am a member, of the Willamette Valley Lumbermen's Association in the Marion Hotel at Salem when the matter of the cross-State line was discussed. I did not attend a meeting of the entire membership at any time when the matter was discussed and voted on. I was notified of such a meeting. I don't know just what meeting that was. At the meeting of the directors which I attended a resolution was adopted the purport (3765) of which was that the association was to present witnesses at this hearing. The matter was deferred until it could be presented to the entire membership; it was merely a recommendation, to be acted upon subsequently by the membership.

The Valley & Siletz Railroad which our company operates is a common carrier. Our company made no effort to get the (3766) Southern Pacific Company or any other railroad company to extend into our timber before we embarked upon the common carrier railroad enterprise which we are now engaged in. I want to correct my answer to the former question. The company does not operate the Valley & Siletz Railroad. The affiliated interests own and operate that railroad. It is operated under a separate name, but controlled by the same interests.

We have joint rates with the Southern Pacific and other transcontinental lines on our lumber.

As to the principal eastern market for our lumber, we ship to the East as far as central New York and, generally speaking, from there over the entire stretch of country to the West, to the Rocky Mountains. Our largest business, regular business, is in the States west of the Illinois-Indiana line. Our company does not operate lumber yards there. Our affiliated companies or interests do not oper-
2077 ate yards in that territory. (3767.) We do not operate any yards anywhere in the East; the only yard we operate is a small yard at Salem, Oregon.

As to why I say our company wouldn't route much if any of its traffic over the cross-State line, assuming that it is to be a shorter line than the existing route by more than 400 miles, the present reasons which control our routing would probably prevail just the same. Those present reasons that control the routing are these: The Southern Pacific is the only line with which we connect, the only line which performs, can perform, any service for us particularly. They do business with us, and we do business with them. If we had another common carrier railroad available or within reach of our plant, I don't think that would change our attitude as to routing, unless we had a connection with it from our own rails. (3768.)

I don't think the Oregon-Washington Railroad & Navigation Company, or any Union Pacific traffic official, has solicited us for the routing of business through the Portland gateway during the last year or two—they have not made any special solicitation. Their traffic men come around, as do all the railroads', and make a visit. We never have had any special request from them, though, for the routing of business through the Portland gateway.

Q. Why have you increased the capacity of your mill to such a substantial extent, if the lumber market has been as discouraging as you say it has been?

A. Because by so doing we decreased our unit costs of manufacture.

Q. You inferred that there might be some indirect or incidental benefit from the construction of the line, but that there would be no direct benefit. Would you care to explain a little clearer what you mean, or what you intended to infer, by your answer in that respect?

2078 A. I don't know whether I can. I have already said that we route our own shipments in probably 99 cases out of 100. I was trying to conjure in my mind some situation where a buyer of our lumber might take it upon himself to endeavor to secure from us routings over this new line. That is the only thing that I had in mind.

Q. Would he be liable to do that, in the event he wanted prompt delivery?

A. I don't see how I can answer that question.

Q. You don't know what would influence him. Well, would you (3769) expect to gain any indirect benefit through the general de-

velopment of the State which might result from the construction of the cross-State line?

A. I wouldn't expect to.

Q. Do you know any reason why your company would not participate in any benefit which would accrue from increased development in the State as a whole?

A. I would think it might benefit only to the extent that the increased use of lumber throughout the territory which we serve was measured. (3770.)

Q. Have you any fear that that general benefit might be offset by increased production of lumber stimulated by the construction of this line?

A. I have no knowledge whatever of any plans there might be for the marketing of any lumber reached by that line. I can, therefore, only answer generally that any increase in the production of fir lumber in this district would be anything but beneficial.

Mr. DEY. Beneficial to whom?

A. To the manufacturers of the lumber and the owners of the timber.

2079 Our company shipped in 1927 about 1,500 cars; in other words, 62,000,000 feet of lumber. Of those 1,500 cars about 50 per cent moved east, that is to points east of Ogden or Granger, or corresponding points on one of the northern lines. That does not include shipments into Texas, for instance. I am speaking of what we class as east. (3771.) We do have some business, of course, in Illinois, and ship some to Chicago. I haven't accurately in my mind information as to the approximate time in transit from our mill at Valsetz to Chicago. Of course, it is in our office. But I would say—and this is perhaps a guess to the extent of one or two days—I would say 12 to 14 days.

Q. Mr. Huggins, in recent years has there been—and when I say recent years, the last 5 or 6 or 7 years—any change in the practices of eastern consumers of lumber, and I mean by that particularly the owners of retail yards, retail lumbermen in the East, in buying lumber, in the amounts they buy and in the quicker deliveries that they specify, than used to be the condition 8 or 10 or 12 or more years ago?

A. From the retail yards our orders are more frequent and for smaller quantities; what I mean to say is there will be one car instead of two, perhaps.

Q. Has the change essentially been this in recent years: That so far as retail yard consumers are concerned they have been carrying smaller stocks themselves and have been ordering more frequently and letting the manufacturers keep the stocks and they just buy a car as they need it? (3772.)

A. That is undeniably true.

Q. Do the orders your company gets from retail yards for cars of lumber ordinarily specify the time within which delivery is to be made?

A. No; it is not usual. They will use the ordinary trade terms of "prompt," or "immediately," but rarely do they specify an exact date. They quite often specify immediately. We understand
2080 that to mean within about 10 days. That is the shipment is to be started from the mill within 10 days from the receipt of the order.

Q. (By Mr. McCULLOCH.) Has not, in view of this change in the practice of retail yards in buying and in specifying quite frequently immediate shipment, made time of transit and saving in distance considerably more important now than it was 8 or 10 years ago in the marketing of lumber?

A. Well, this change in the practice has been undoubtedly brought about, in a measure, at least, by the greater rapidity of transit. (3773.)

I said that 80 per cent of our shipments to the East are routed via Roseville and 20 per cent via Portland. I think that would be fairly true of one or two or three years' business. If I knew that it were a fact that the Southern Pacific Company would make just as much money on a car of lumber, say, to Omaha, whether we routed it via Roseville or via cross-State line, if that was built, I don't think I would have any particular choice as to route, then, under those circumstances. There are a few instances in which our company must observe routing requests or instructions from our customers.

Exam. ROGERS. Mr. Huggins, I would like to ask you this: As I get this discussion about the lumber dealer in the East and the shorter distance and time, it boils down to a question of whether the difference of a couple of days in the delivery of the car to the dealer in the East is a matter of great importance or minor importance? (3774.)

A. I would think, from our own experience and our own practice, that it was not a matter of one or two days that was of such great importance to him as it was a matter of comparative time in transit now to what it was several years ago, before this practice was changed.

Exam. ROGERS. What was it several years ago?

A. Oh, we used to figure on 30 days, 25 to 30 days. They have cut it in half.

2081 Redirect examination.

I honestly don't think a new route that allowed us to save a couple of days under what it now takes, would make any difference in our method of doing business, method of routing, in our judgment, in the light of our past experience. I don't think we would be concerned.

Recross-examination:

Our Valley & Siletz Railroad began operation as a common carrier January 1, 1918. We did not have joint rates on the coast group basis from the time our road went into operation. (3775.) I be-

lieve it is a fact that we were compelled to institute proceedings and prosecute them before the Interstate Commerce Commission to obtain joint rates on the coast group basis before we got them.

As to whether the line shown in brown on Exhibit 100, from Independence out to near Kings Valley, is the location of our mill on this map: It extends up, takes an upward turn there until it is almost directly west of Independence. There is an extension that has been built on. It does not show in this map because the map is not correct. It is not complete. It does not go down the full length of our line. That is the location. (3776.)

2082 J. O. ELROD was thereupon produced as a witness on behalf of defendants, and, having been duly sworn, testified as follows:

Direct examination:

I am engaged in the lumber business in Oregon. The name of our company is the Umpqua Mill & Timber Company, and is located at Reedsport, about 20 miles north of Coos Bay.

Q. Can you show the commissioner on this map about where your mill is, Exhibit 100? That is the Coos Bay line down there [indicating].

A. What is this [indicating]? This is Reedsport?

Q. Yes; right there.

A. Winchester Bay.

Q. About opposite the words "Winchester Bay" on the left hand side of the map?

A. Yes, sir.

Q. And located on what river?

A. The Umpqua and Smith River.

As to whether we ship out of there by water, directly or indirectly (3777): Very little water shipment; mostly rail. Probably 20 per cent by water. As to how our water shipments move: Part of the time there is a small boat right at the mill, and the rest of the time we ship to Coos Bay.

We ship some lumber east by rail. And that lumber is moved by the Southern Pacific through Ogden, largely. We allow the railroad company that serves us to have the preference on the routing; we try to route everything on the originating line.

The capacity of our mill is 150,000 feet, eight hours. We manufacture some spruce, mostly fir. We have not been able to operate to capacity on the market during the past few years because prices are so low they don't justify it. (3778.)

2083 We have interests in other parts of the State.

I think I have a pretty fair knowledge of the western Oregon timber belt.

In my judgment, I don't think the construction of the cross-State line would affect the timber owners of western Oregon at all in enabling them to hasten the marketing of their product.

We need either an increased demand for the use of lumber or less production. An increased price is what we need.

We have been able to get into all of the markets that we want to get into with our present transportation facilities. We haven't had any difficulties.

As to what my judgment is as to whether the timber belt, this natural resource of western Oregon, should be rapidly mowed down, or whether the production should be held (3779) back so that the industry may get on a profit-making basis: There is not any question but what it should be held back. There is not any question but what we are overproducing. (3780.)

I do not see any advantage to the lumbermen of western Oregon in the construction of this proposed cross-State line.

As to how far do they haul logs in Oregon now: That is a pretty hard question to answer. They are hauling logs longer than they used to. Each year the forest is moving back.

Q. What is the tendency with respect to the increase or decrease of milling on tidewater?

A. Well, the tendency is increasing on tidewater. That involves a constantly increasing log haul.

I think there are some log hauls of 100 miles. I don't know whether I could just tell—that is, I don't know just how far, but they are hauling a good deal longer. They are hauling logs farther up north than they are here.

2084 I do not look to see any further large investments in manufacturing plants in the woods removed from tidewater. (3781.)

Cross-examination:

We have a port down at Reedsport where we are attempting to develop our harbor facilities. I have taken quite a little interest in the development of that port. As to whether I could see any advantage from the construction of this cross-State line if it had the effect of ultimately bringing the Union Pacific to tidewater either at Reedsport of Coos Bay, it is possible there might be some. I figure that would depend a good deal on how extensive the port is developed. In other words, if the port ever got to be deep enough water so that large trans-Atlantic ships came in there, then there might be some tonnage got there. We do not look for that, however, in the near future. We expect to have a harbor there that will take care of (3782) coastwise business. I would doubt whether it would result in any benefit to the Coos Bay harbor, where the larger ships do come in. I think Portland would, for all that kind of shipment, probably be the controlling factor, in my judgment. I think it likely Portland would get the shipping regardless of the transportation or harbor facilities that were available. I am not posing as an expert. That is just my opinion. Portland has its docks and is entranched in its business. The boat lines come to Portland, and I think it would be very hard for any small place to affect a city that has the shipping Portland has.

Q. Well, if they had the facilities, isn't it reasonable to assume that they would get a part of the business?

A. Well, they might. I don't know. But at Flavel down here on the Columbia River it was tried and it never diverted very much.

The Hill people had boat lines and a great many things there a few years ago, but it didn't seem to affect us much here.

2085 Q. Did they have more than one railroad serving Flavel? (3783.)

A. No; I don't know as they did.

I think probably the principal market for our lumber production would be Texas and southern California. We ship some all over the United States, but our principal markets are in that district. We are not a great deal interested in reaching the Middle West. We do some. I could not tell you what percentage is marketed in California. Mr. Wells, my partner, handles the details of that, but I would think 30 per cent by rail in California and probably 20 to 30 per cent by water, and the balance is scattered over the United States. We do not ship a great deal to the Middle West. We have never attempted to develop those markets, ship more of our product there than we are shipping at the present time; we have not tried to develop any market. We try to sell where the best market is available. (3784.) As to whether I think that the place where we sell our lumber, or the greatest portion of it, at the present time, is affected by our railroads and the direction that they take us to, or that it is affected by the lack of railroads, I don't think so; no.

We are not operating our mill to capacity at the present time. As to whether we have increased our output any during the past 2 or 3 years, we have a new mill there. We have owned our timber in there a great many years, but we have just started to developed the mill. We built the mill about 3 years ago. Last year we operated the mill on (3785) two shifts about half of the year, and one shift the balance of the year. This year we will only operate one shift, and we will only operate about half of the time. In fact, we are shut down now.

The condition of the lumber market when we constructed the mill is better than it is now. It didn't look so very good then. What

2086 fundamental factor caused us to construct the mill in times of poor market is a rather hard question to answer without going into a lot of details. (3786.) I haven't any particular reason. Three or four years ago the majority of us thought we were going to come into a better market, but we didn't do it. We owned a lot of timber down there and our taxes have increased from a very nominal sum to very large sums, and financially we didn't feel that we could afford to keep on paying out of our resources taxes on this timber. If we had thought the market was going to be what it has been, nobody would have built a mill. (3787.) There had not been very much deterioration in our timber that caused us to want to market it. The timber in that country is not overripe timber. As to whether it is true that there is a great amount of timber in western Oregon that is overripe and is deteriorating rapidly, there is in all timber to some extent. I think that is a very much overexaggerated theory. It is probably true that there are a great many timber owners who really feel that they are suffering from the bur-

den of carrying heavy taxes on their timber over a long period of years and who feel that they must be allowed to market their timber in some way; I don't know. I can't see how the construction of this line would hasten the marketing of western Oregon lumber or affect the western Oregon lumbermen in any way at all. The State of Washington, with 3 or 4 transcontinental railroads serving it east and west, has been marketing much faster than the Oregon timber, but I don't think the railroads had half as much to do with it as their water transportation. (3788.) Possibly the railroad transportation had something to do with it.

Q. You are advocating that the production of lumber be held back as much as possible. Now I am wondering whether you want that retarding influence to be used altogether in the State of Oregon, or whether you are speaking for the entire producing area?

2087 A. Well, I am saying that is what should be done in the entire producing area, of course.

Q. Is there any reason that you know of why all of that retarding should be done at the expense of the Oregon lumber owners, who have been paying taxes on their timber for all these years?

A. Well, I don't think it has. I think Oregon is doing less than most other places at the present time. That is my opinion, without having the data. By "doing less" I mean less of curtailment. I do not mean cutting less timber. I mean they have less of the cooperation to curtail. I think many other districts are doing better than Oregon in the matter of curtailment. (3789.) As to how I reconcile that statement with the fact that Washington is cutting about 7,000,000,000 feet a year as compared with Oregon's 4,000,000,000, Washington's capacity, probably, if you take their maximum capacity with their present production—it is a matter of opinion that I haven't checked up—but it would be my opinion if you took the maximum production of Washington and took what they are producing today, there will be a much greater percentage less of their capacity than a similar comparison between the maximum capacity production of Oregon and the present production of Oregon.

Q. The Long-Bell mill down here recently constructed at Longview has not retarded the Washington production very much, has it?

A. I think they have.

Q. You think that has retarded the Washington production?

A. Well, that has increased it, but I think they have taken off recently a shift; in fact, I know they have.

I don't call to mind any 100-mile log hauls in western Oregon. They are probably doing it, but I don't know just where. We do not haul logs to our mill on the railroad. (3790.) We have a very short road to put them in the river and tow them down. We are hauling logs from out west here at Carlton on the Southern Pacific to

2088 Portland. I don't know how far that is by rail but by air line it is about 35 or 40 miles.

We are not a member of any of the lumbermen's associations. We have a new mill and we haven't joined, though we cooperate with them.

Q. Do you want to be understood as testifying here that you can see no benefit to western Oregon to result from the construction of the cross-State line?

A. That wasn't the question you asked me.

Q. Well, what was the question?

A. You said to western Oregon lumbermen.

Q. That was the way you understood the question?

A. Western Oregon lumbermen. I said no, I could see no benefit.

Q. Well, can you see any benefit to western Oregon as a whole. (3791.)

A. Well, I don't know enough about this railroad and the country it opens up to say, but I can't see where there is any. There might be some benefit. It is probably impossible to make any improvements that might not be of some benefit in some particular lines. If it opens up timber, which I don't know whether it does or not, I would say that would be decidedly bad policy for Oregon.

Q. (By Mr. ELLIS.) But you admit that it would—you will admit, will you not, that it would be of some benefit to timber owners who, by reason of having overripe timber or being subject to fire hazards or the destruction of timber by pests and through tax burdens, might be benefited by additional railroad construction?

A. Possibly, yes. I don't know. I don't know that at all.

I don't know whether there is any such timber land along the proposed route; I don't know the location even. I just know there is talk of a road going through there; that is all I know. (3792.) I haven't any special information one way or the other concerning it.

2089 I could not tell you how many cars our company shipped by rail in 1927. I could tell you in feet approximately. We cut in 1927 about 36,000,000 feet, and I can't tell you, only approximately, how much we shipped by water, but I think we shipped in 1927 probably 40 per cent by water—more than we ordinarily ship. To California, that was. The balance went by rail. It would be purely a guess for me to state what percentage of our rail shipments moved east of Ogden or Granger. I didn't look that up. My idea is it was approximately 20 per cent. I could not tell you whether we shipped any to Chicago. Very little, if any.

On our shipments east we try to favor the Southern Pacific as much as possible. (3793.) I don't think we route our shipments ourselves, that is, insert our routings in the bill of lading; generally we do not. I think mostly we leave them unrouted and merely specify the destination. I presume our company gets orders for lumber from eastern buyers in which a particular routing is specified or requested. As I said, I don't handle the orders, but that happens occasionally, of course. But, as a general plan, I think not.

Our rates from our mill at Reedsport on lumber to eastern destinations are in most territories the same as those that apply from Portland and Eugene and points in the Willamette Valley generally.

Wherever we ship it they are. But in some places we have a differential. But to all points like Denver, Omaha, and all points east they are the same. I don't know whether we have ever made any shipments from Reedsport to eastern destinations via Portland; I presume some. I know that our rates apply via Portland to the East as well as via Roseville (3794), on the same basis. (3795.)

Very often one of the conditions in orders we get for rail shipments is one calling for immediate shipment.

2090 Q. Now you expressed the opinion that the production of lumber, fir lumber here in western Oregon, ought to be held back. Did you have any idea in testifying here that if this proposed cross-State line should not be built, that that would have some effect on holding back the production of fir lumber in Oregon?

A. That would not affect my testimony at all.

Q. (By Mr. McCULLOCH.) You didn't have such idea as that in mind?

A. No; I didn't. I have the impression it will open up very little timber, but that may be erroneous, as far as that is concerned.

Q. Do you have the idea that the construction of the cross-State line, if it were built and put in operation, would stimulate the production of lumber in Oregon?

A. I don't know. I have an idea it would not affect it, unless it opens up new timber. (3796.)

Q. Well then, as I understand your testimony, you did not figure that the construction and operation of the cross-State line would either hold back the production of lumber in Oregon or stimulate it?

A. No; not unless it opens up other timber, I don't think that would affect our western Oregon mills one way or the other.

Q. How did you happen to be interested to testify at all here, then?

A. I wasn't. They wanted my opinion. Mr. Dey asked me to come up, and I did. Mr. Dey phoned me and asked me if I would not come up. I told him I would. That is all I know about it. And the only talk I had with Mr. Dey was about a minute over the phone.

2091 I don't know whether an increase in the rates on lumber to eastern destinations would certainly hold back the production. (3797.) We have had an increase in rates, and production was not held back. I don't think it would be beneficial to hold back production by any such means as that. (3798.)

It would usually be beneficial, other things being equal, for a lumber manufacturer to have his mill at a point where there are two or more railroads serving him instead of one. It is true that in the Pacific Northwest the large lumber milling operations have concentrated at points where there was the greatest amount of competitive rail service available. Portland, Tacoma, Seattle, Spokane—that is true. However, I think there are other things that

have contributed to that location, which I think is tidewater. I think boat shipping and deep water has had (3799) more to do with that than just the fact there were two railroads there.

2092 C. D. JOHNSON was thereupon produced as a witness on behalf of defendants, and, having been duly sworn, testified as follows:

Direct examination:

I am engaged in manufacturing lumber. We have mills in Lincoln County; at Toledo, Lincoln County, Oregon. The name of the company is the Pacific Spruce Corporation, of which I am the president. I am very active in the management of it.

The capacity of our mill is 50,000 feet an hour. (3800.) We have run sixteen hours a day; we are now running eight. That is a capacity of 400,000 feet on an eight-hour shift. We are running to capacity as far as an eight-hour shift is concerned. We are only running what we class ourselves as one-half capacity. We are set up for a two-shift operation.

We bought that property down there at Toledo in 1922, commenced construction in 1922.

We are located on tidewater as well as upon rail. On the Yaquina River. We are not on the bay. We are on the Southern Pacific Company's Yaquina branch railroad (3801), which runs out from Albany, Oregon, from the main line.

Q. To the coast; and your mill is located approximately opposite the words "Yaquina Bay" on the left hand side of Exhibit 100?

A. About four miles as the bird flies to the ocean.

We ship about 40 per cent of our output by water and about 60 per cent by rail. As to what territories we serve by rail: We serve the Middle West. Practically all of our product that goes by rail is sold east of Denver, east of the Rocky Mountains. The first business we do is in Kansas. We route our shipments Southern Pacific. I know that there is a shorter route through the Portland gateway, in which the Union Pacific lines or the Northern lines could participate.

2093 Our shipments move through Roseville, I believe you call it, this side of Davis, in California. (3802.) Then through Ogden. We always route our shipments that way. As to whether our customers ever ask us to route a certain way: I don't remember, but we don't—as a policy, we route our own lumber. The only time we comply with the customer's request is that he wants a certain delivery. If he is on the Chicago & Alton Railroad with his yards, and he wanted delivery by the Alton, why, we give it to him. He may be on the Alton, or the Wabash, or some other railroad, and he may have his yard located on one of those lines and want that sort of a delivery. We give him the deliverying carrier that he asks for. Otherwise we route our own shipments.

I am only familiar in a general way with the proposed cross-State line which in this proceeding an attempt is being made to require

one or more railroads to build across central Oregon—what I see in the papers and hear people talking about it a little. (3803.) As I understand it, they are asking for a line to be built from a connection with the Southern Pacific across to a place some place on the Union Pacific called Ontario; I don't know the exact connection; about 200 miles, I think, across the desert. As I understand it, it is to tap the Southern Pacific a few miles north of its connection with Klamath Falls. In a general way I am familiar with the Southern Pacific Company's Alturas route, which is being built. I understand that is to be an extension of what is known as the Natron cut-off through to a point west of Ogden in the State of Nevada.

Q. (By Mr. DEY.) Now, let us assume, Mr. Johnson, that the Alturas line of the Southern Pacific Company is completed,
2094 that it is an accomplished fact, go on that assumption; then assume also that this cross-State line they talk about is also an accomplished fact and in operation; that the cross-State line is 215 or 216 miles shorter than the Southern Pacific Company's Alturas line; is there anything in that situation (3804) that you can see that would cause you to change your past practice of giving the long haul of your business to the Southern Pacific?

A. No, nothing whatsoever.

As to this 215 or 216 miles shorter distance: Lumber, as a rule, is not wanted in a tremendous rush, and the people we do business with carry a reasonable stock of lumber, and I don't think a day or two—I doubt if that would make any difference in the time because our shipments move promptly now. We move lumber to Decatur, Illinois, or Quincy, Illinois, or Bloomington, Illinois, in about 12 to 14 days it goes through, and to Toledo. Clear around by Roseville. We have never had the question raised by our customers as to whether or not we could make a day or two earlier time by using some other route, or something of that sort. I am more or less familiar with the situation over in western Washington. I don't think the lumbermen over there are any more prosperous than they have been here in Oregon the last several years (3805) about the same. The reason I would give for the more rapid cutting of the Washington timber belt than has taken place in the Oregon timber belt is that the production in Oregon is practically all on tidewater, all on deep water. I mean Washington, Puget Sound and Grays Harbor. And, if you look at the map of that country you will see it takes in a good deal of territory; and the timber grew right around Puget Sound and Grays Harbor. About 90 per cent of all the lumber manufactured in Grays Harbor goes out by water.

2095 We have had a great deal of inbound freight when we were under construction. Locomotives came from the Baldwin Locomotive Company, Philadelphia. That came by Southern Pacific. I am not sure whether we routed through New Orleans or Ogden. We tried to give the Southern Pacific the longest haul.

We have operated in the lumber business for a good many years. (3806.) Besides Oregon we have had mills in Texas, Louisiana, Arkansas on the Iron Mountain; on the Southern Pacific at Nacogdoches, Texas; on the Iron Mountain at Huttig, Arkansas; on the Cotton Belt at Alden Bridge, Louisiana; Kansas City Southern. Our practice down there with respect to routing shipments was no different than what it has been here with respect to the carrier that served us. If the carrier gave us the cars and the service we gave them the long haul.

I am a member of the West Coast Lumbermen's Association but not of the Willamette Valley Association. I don't think the Willamette Valley Association is confined to rail shippers exclusively because we have been invited to join the association, but we haven't seen fit to join. (3807.)

Cross-examination:

Q. (By Mr. ELLIS.) Mr. Johnson, what was the fundamental reason which prompted you to locate your mill at Toledo?

A. Well, we bought a property down there that was started by the Government, was one reason.

Q. Well, what was the nature of the Government project that you bought?

A. Well, they started an operation down there and built about 25 miles of railroad and about a billion feet of timber and commenced the construction of this plant for the purpose of supplying airplane material for the allied governments during the war.
2096 That particular stand was about half spruce and half fir. But the present holdings of the Pacific spruce are largely fir.

Q. Well, is it correct to say that the principal reason for your locating there was the fact that you were able to buy a large body of timber with a railroad already constructed, with a sawmill partly constructed, and with boats and other facilities available?

A. Well, the plant wasn't constructed. We constructed the plant mainly. It had been started and the machinery was bought. (3808.) We constructed the plant, and there were no boats. The boats that we own, we bought them. We didn't get the boats with the rest of the plant.

Q. But is it not true that the primary reason for your location there was the fact that the Government was disposing of a large tract of timber with a railroad constructed, and with a mill partly constructed, and you were able to buy this large body of timber and other equipment at a fairly reasonable figure?

A. Oh, well, I suppose that had something to do with it, but I had prior to that time sold my interests in the South and was looking for a location and landed in that part of the country. Not any of that timber was in such a condition that it had to be manufactured to prevent deterioration. It was all in good condition. (3809.)

I think if we had been starting right from the beginning to install a sawmill under normal conditions, we would have located it at

Toledo. As to whether I think the peculiar conditions which confronted us would not have changed that situation at all, I don't know of any better location, unless it is some point where they have deep water, deeper water than we have over the Yaquina bar. (3810.) There used to be great advantages in a point served by more than one railroad, but there is not so much any more. At one time we owned a plant situated on only one railroad.

2097 Q. Has it been your practice to select manufacturing points served by only one railroad, or do you usually try to get competition in railroad service?

A. Well, we usually select a place on account of the timber. Transportation is an important thing, but you will look after the timber, the raw material. That is the main thing about selecting an operation for the lumber business. If you have more than one railroad there might be an advantage in it, there might not.

We operate our own boats. We take the lumber from our mills by our boats, mainly to California. California is tributary to us on a low rate for freight, and we send largely low grade lumber to California. It is a good market for certain kinds of lumber. It is very largely low-grade lumber that we ship by water. (3811.) And practically all of our better grades of lumber move by rail. The market for that better grade of lumber is pretty widely distributed. It goes to various places, in New England, Ohio, Indiana, Illinois, Iowa, Minnesota, Kansas, and Nebraska. We route practically all of this by the Ogden gateway. We select the Ogden gateway as against the Portland gateway because the Portland gateway to us would be an unnatural route. That would be what might be called short-hauling the line we are located on. That was the factor that has influenced us in routing via Ogden. I don't think we have ever been solicited by the Union Pacific to route our lumber through the Portland gateway.

Q. Well, if the construction of a cross-State line shortens the distance to the markets of the Middle West and East by approximately 400 miles, and it is so arranged that the (3812) Southern Pacific Company gets as much earning out of it as it does now, would you have any object to routing via Crescent and the cross-State line?

2098 A. I would have no objections to routing it any way that would be satisfactory to the line I was located on. The thing we are interested in is not taking any undue advantage, or doing anything that would injure the line that we are dependent on largely for service. It is a fact that most of the routing is done by the railroad agent at point of origin and that we give him the destination and delivering line, and he does the rest. We put on the bills of lading—we make the bills of lading in our offices of the routing. Orders are written up that way. All junction points are specified, routed clear through to destination. We make the bills of lading and give them to the agent. We have a traffic manager who looks after that very sort of thing.

As to what I know personally about the prosperity of the Washington lumbermen (3813), there has been no prosperity in the fir industry for four years, either in Washington or Oregon. In making the statement that I did about the prosperity, or lack of prosperity, of the Washington lumbermen, I didn't mean to imply that I had direct information concerning their profits or losses—I don't know, but that is so well understood among the industry that that is hardly debatable. I am speaking in a general way. There might be some people making money but in a general way it is so well understood among the manufacturers of lumber themselves, that it is not debatable.

Q. (By Mr. ELLIS.) Well, have you made any investigation to see whether the Washington lumbermen, as a whole, were making any more or less money than the Willamette Valley lumbermen, the smaller mills located on the Southern Pacific?

A. All this lumber is in competition, and it is all on about the same basis. Some institutions might have some advantages over others, cheaper logging, a better quality of timber, or something of that sort. It all takes the same rate. Lumber manufactured in Washington and Oregon all take the same rate, both by water and rail. (3814.)

2099 Q. How do you account for the fact that 90 per cent of the Grays Harbor lumber moves by water in contrast to your testimony that only 40 per cent of yours moves by water?

A. Well, they constructed their plants there some several years ago. They have been in Grays Harbor a long time, and they built their plants and built up their lines of business on that basis. There is a difference in the types of lumber that are manufactured there and at our plant. We are in position to refine our lumber, and some of the plants located at what is known as a cargo mill are not equipped to refine their lumber. In other words, they ship raw material, but they ship Jap squares to Japan. Well, that is raw material in reality that is taken over there and re-manufactured over in foreign countries. As to whether their situation would be entirely different than the situation of the western Oregon lumberman who is looking to the Middle West largely for his market, they don't cater to the rail trade as much as mills that are located in the interior. A mill that is located in the interior as a rule caters largely to the rail trade.

In 1927 our company shipped about 4,000 cars to all destinations. (3815.) Practically all of them went east to points east of Ogden or Granger, Wyoming.

In shipping to the Atlantic coast we ship there by water. But if we are shipping to some place in the interior, a high-grade lumber, that goes by rail. It would take a car three weeks to get to New England by rail. It takes 10 or 12 days to Chicago. (3816.) I should say a car going to Bloomington, Ill., would take about the same time as a car would go to Chicago. (3817.)

I don't remember any orders received from eastern customers that specify or request the routing via the Union Pacific system lines.

If we got such an order, we would not acquiesce, unless they had some particular reason. There would have to be some good reason for it.

2100 As to whether in recent years I have observed any change in the buying of lumber by a retail lumberman in the East in comparison with their practices of a number of years ago, 8 or 10 or 12 years ago, the tendency of retail merchants is to carry less stock on hand. For instance, the customers that used to buy a hundred cars of lumber at a time now buy ten or fifteen. We frequently get orders for a single car at a time. (3818.)

A great deal of our business is done by telegraph; they wire us for a price on this lumber and "How quick can you ship?"

Q. Now in selling your lumber, this 4,000 cars a year, practically all east of Kansas, that moves by rail, in distributing that lumber are you in competition on any of the items with lumber from competing districts of production in the United States?

A. We are in competition on some item from nearly every producing district.

Q. What are some of the principal producing districts in which your company and the lumber mills of western Oregon come into competition in eastern markets in selling their products?

A. We come in competition with yellow pine from the Southern States; we come in competition, on some items, with western pine from California, pondosa pine from the Inland Empire. There is some timber in Minnesota yet. We come in competition with that.

Q. Now, with the exception of the western and white pine in California, and the pine of Oregon and Washington, all these other sources of lumber supply are much nearer the big consuming markets of the East, both in distance and point of time, than the mills are here in western Oregon; that is cor- (3819) rect, is it?

A. Yes, sir.

2101 Q. Now does that difference in distance and time as between the western Oregon mills on the one hand, and the southern pine mills, say, on the other, from such markets like Illinois, and Indiana, and Ohio, and the States east, become an important factor in your competition with the southern pine mills?

A. Well, I am not familiar with that question. I left the southern pine field ten years ago, when I came from the South. Prior to the war it was not uncommon to take 60 days to move a car of lumber from a point in Arkansas to a point in Illinois, or off of the Kansas City Southern, or the M., K. & T.—any of those southern lines. There was nothing uncommon about it. The average was more than six weeks. But I have an idea that those roads have improved their condition and handle their business more promptly than they used to.

Q. Well, what I was getting at is this: Suppose there was an eastern lumber yard that had some items he could get either in the southern pine or in Douglas fir, and it was just a question of price and time of delivery. Now if he could get a delivered price on the

southern pine items that was comparable with the delivered price on Douglas fir items, do you think that the eastern lumberman ordinarily, before he decided where he would buy, would take into account the time within which he could obtain delivery of the stock that (3820) he wanted?

A. Well, the delivery is so good from the Pacific coast that I don't think that would enter into it. He knows about the time it takes to get lumber from here. Ever since I have lived on this coast the service has been good; the railroad service is good; and I think the service from the transcontinental lines on this coast is better than from any other part of the country. They perform a faster, better service they ever performed from the South or any other lumber district.

2102 Redirect examination:

I do not expect to see, anywhere in the near future, in Oregon and Washington, any great increase in the production of fir lumber above what it has been, and I hope it will not come. (3821.)

GEORGE B. MCLEOD was thereupon produced as a witness on behalf of defendants and, having been duly sworn, testified as follows:

Direct examination:

I am the manager of the Hammond Lumber Company. The Hammond Lumber Company mill is in the Willamette Valley on the Mill City branch of the Southern Pacific, 35 miles east of Albany, and has a capacity of 55,000,000 feet a year. The mill has been operating up there since the late 'eighties, but by our company since May 1, '99. Located exclusively on the Southern Pacific.

We route our eastern shipments by Roseville, to the extent that they can be delivered that way. A Minneapolis car goes the other way. We use that route because that is on the initial line, and we want to give our business to the line on which our mill is located. And we have been doing that all these years with the Portland gateway open to us. (3822.)

As to what other mill in Oregon are our people interested in: The Hammond-Tillamook Lumber Company has a mill at Garibaldi, on Tillamook Bay. The Hammond Lumber Company Mill City mill is on the Mill City branch of the Southern Pacific 35 miles east of Albany. The Garibaldi mill is about 2 miles from the ocean, on the Southern Pacific, on the Tillamook branch of the Southern Pacific, 100 miles from Portland.

2103 I am familiar with this proposed cross-State line that is asked for here. That is going to have no effect upon us in the routing of our business. With the cross-State line an accomplished fact, we will still route Southern Pacific, for the long haul, either by way of Roseville or Alturas. (3823.)

The capacity of the mill down at Garibaldi is 75,000,000 feet a year, one shift. We ship there about one half by water and the other half Southern Pacific. The production now is 75,000,000 feet

a year, the Garibaldi mill; 55,000,000 a year at the Mill City mill. That is 8 hours a day. That is the production. Asking if that is the capacity: That is what we produce. The Mill City mill is not equipped to run nights. The Garibaldi mill is equipped to run nights. We have the logs on hand and can run nights right now if the market justifies it, but unfortunately it does not. That means that we are now shipping about 92,000,000 feet per year by rail. The Hammond Lumber Company had a big mill down at Astoria, Oregon, that burned here two or three years ago. Our company was in the business there 14 years. (3824.) The capacity of that mill was about 200,000,000 feet a year, day and night. That was located on the Spokane, Portland & Seattle Railway and on tidewater. We shipped some by rail. As to who got the long hauls: The Hill lines, the two Northerns.

I have lived in this State 28 years, barring 4 years I lived in California.

As to my judgment with respect to this cross-State line, I think it will be hurtful to the western Oregon lumbermen, because it will take business away from a line that can carry it all, and then we will have a capitalization built up that we will have to pay a rate to justify it, or to carry it.

2104 Cross-examination:

Q. (By Mr. ELLIS.) Would you still say that, Mr. McLeod, if it were shown that the cross-State line would be a more economical route for the transportation of the lumber, and that the earnings of the carriers might be increased through its construction? (3825.)

A. I can't answer that "yes" or "no." The Southern Pacific can carry the business. If you built another road, it takes business away from a carrier that can take care of it, and, therefore, there is a railroad that is equipped to do business and can't do it because the traffic is diverted from it. The same thing from even the Portland gateway.

Q. Well, to what extent do you take into account the saving in length of haul of more than four hundred miles via the cross-State line as compared with the existing route through Roseville?

A. Well, the railroads are built and they have got to be maintained. We that furnish the freight have got to be charged a tariff to maintain the roads.

Q. Well, don't you think you are paying now for that 400-mile haul, that extra 400-mile haul?

A. No, no; I think the railroad is making less, but I don't think that that changes the rate at all. The rate will be just the same, because we have got four or five roads serving here, and that won't upset the freight traffic by building that cross-State line.

Q. You think the railroads themselves are absorbing that cost of 400-mile haul?

A. Yes.

Q. Well, if by means of the construction of the cross-State line and an adjustment of the divisions between the carriers,
2105 (3826) the Southern Pacific Company could make as much earning as it does not on its western Oregon lumber and escape the burden of this 400-mile haul that you say it is absorbing, you wouldn't have any objection to routing your lumber across the cross-State line, would you?

A. If the Union Pacific would want to give them enough to take care of their local and all they would lose on their overhead on their present main line, that would be one thing, but on principle—it comes back to principle—we want to favor the line on which our mills are located.

Q. You understand the proposal of the Oregon commission is that the Southern Pacific should be given as much earning on the western Oregon lumber as it is getting now via the longer route. Now, do you see any—would you have any fundamental objection to that sort of a plan?

A. Well, on an even break I would give it to the Southern Pacific. If the Southern Pacific were going to get more by losing the traffic, and would say so, as long as we are on their lines I would favor them.

Q. In other words, if they are going to get more by hauling it this additional 400 miles——

A. No; if they get more out of it net, taking into consideration the loss of traffic which couldn't carry the overhead on the longer haul under the factors, if the Southern Pacific (3827) would make money by giving away the traffic—which I don't think they could—I would favor turning the business away from them.

Q. Have you even been solicited by the Union Pacific system officials for the routing of your lumber traffic, eastbound
2106 through the Portland Gateway?

A. Yes; Mr. Engelke, from Mr. Lounsbury's office, calls on us regularly for us to route our freight by their route, but we give it to them at Ogden instead of Portland.

Q. Did he ever ask you to give it to him through Portland?

A. Oh, yes; he wanted just a few cars, but we didn't give him the few cars.

Exam. ROGERS. What did you tell him?

A. I told him, "We are on the Southern Pacific, and we are on branch lines, and we are doing all our business with them; we have got to maintain the road we are on and see that they are profitable in getting the business."

2107 Redirect examination:

I am a member of this Willamette Valley Lumbermen's Association. All of the men in that association do not favor this cross-State line. (3828.)

Further cross-examination:

The Hammond Lumber Company does not favor this cross-State line.

The Mill City mill shipped by rail last year about 2,000 cars. This is my best judgment. From the Garibaldi mill—our company acquired that April 1, 1927, and it ran in a desultory manner up to the middle of April this year, because we didn't have a log supply. But since then we are shipping at the rate of, say, 1,400 cars per annum by rail. Of our 2,000 cars from Mill City, about 45 per cent of those move east of Ogden or Granger. We even ship to Massachusetts, high-grade lumber, kiln-dried, worked right ready to go into houses. (3829.) I don't know how long it takes to go from Mill City to Massachusetts by rail, but we don't have complaint in regard to it. I think it takes less than 14 days to go to Chicago.

We get orders from customers for immediate shipment. Those orders come in not infrequently. We get orders from our customers requesting or specifying routing via various lines, and I would qualify that, mainly the delivery line. If we got an order, however, from a valued customer in the East asking us to route his shipments over the Union Pacific system lines, very likely we would observe such a request.

I said that the cross-State line, if built, would, in my opinion, be hurtful to western Oregon lumbermen. I have heard of the Alturas line of the Southern Pacific. I know that it has been announced in the papers that that line is being built now and will be put in operation about the middle of next year. (3830.)

2108 I do not think the construction and operation of the Alturas line will be hurtful to the interests of the western Oregon lumbermen.

Q. Why not?

A. Well, if—now, part of this is what I have read about the country it goes through, and part of it I know at first hand——

Q. Before you answer this question, I want to tell you, Mr. McLeod, it has been testified in this hearing by the chief engineer of the Southern Pacific that that line will represent an investment of approximately $6,000,000, so I wish you would keep that in mind, in answering.

A. Well, the Southern Pacific is building it—that has a bearing—but it will go through a country out of Klamath where there is some agriculture, and further on it goes through pine timber, and will develop something new.

I think the building and operation of the Alturas line will be of benefit to western Oregon lumbermen, in this way: We will go east then on a shorter road with one company (3831) handling us throughout, handling our freight through to Ogden. One company handles our freight through to Ogden now.

Q. All right, then we can leave that out. Then by using the Alturas route western Oregon will have a route little more than 200 miles shorter than the existing route through Roseville. Now, is there any other benefit, or possible benefit, you have in mind to

western Oregon lumbermen that will result from the building and operation of the Alturas line, than that shorter route by 200–212 miles?

A. I don't know of any other.

Q. Now, the cross-State line route from western Oregon, Eugene, and points in Lane and Douglas and the central western Oregon counties, will be an additional 215 or 220 miles shorter to the East, even, than the Alturas route. Now suppose that in this pro-
2109 ceeding the Southern Pacific were required to build this cross-State line over to Crane, or to join in the building of it, so that it had the right and would use the line as its own line clear through to Crane, would that change your opinion at all as to the benefit to come from construction of the cross-State line to western Oregon lumbermen?

A. I believe to that extent it would. (3832.)

Further redirect examination:

I mean by that that they have the line on which our mills were located, have sized up this situation and realized that it was a profitable thing, and then we would favor the line on which our mills are located, and it would have traffic to sustain it. By which I mean that if the Southern Pacific Company has the Roseville route and the Alturas route, and also the cross-State line route, we will give them the cars and let them take any way they want to.

Q. Now, do you, Mr. McLeod, look to see any substantial increase in the production of fir lumber on the west coast here? I ask you that question because traffic estimates brought in here in this case show a very—rather a large prospective increase that is expected to move, and that this cross-State line will be necessary to help move. Now, what have you to say along that line?

A. I regret to say that with my experience that idea is fallacious. (3833.)

Exam. ROGERS. Where is the Alturas route going to benefit western Oregon shippers?

A. I feel that because it will get traffic and it will benefit the road on which our mills are located.

As to whether I mean by that that the benefit will come to western Oregon shippers in the same way and to the same extent as if the Southern Pacific had an increase in the passenger business:
2110 My thought is this, that that road being built by the (3834) Southern Pacific, therefore it speaks for itself if they build if they think they are saving in the traffic east, and, therefore, we will benefit by having the road on which we are located interested and giving us some better service. We are getting good service, but if we can get better service, why, we are not averse to taking it.

Exam. ROGERS. Well, do you think you can get better service by reason of this shorter distance over the Alturas route—is that what you are talking about?—or is it just the general benefit to the Southern Pacific that will come about through the Alturas route?

A. I think both. I think we will get some better service.

As to supposing that they didn't build the Alturas line but did build the cross-State line whether that would change our routing any: I would favor giving the business then to the Southern Pacific, and presumably if they built that road they built it to use, and therefore would take the freight that way.

Exam. ROGERS. Well, suppose they built it, though, because the commission told them to—suppose instead of routing this eastern traffic over the cross-State line, and they continued to take it through Roseville as now, would you change the routing (3835) on your freight?

A. Well, I would be inclined to work the railroad on that. If they could handle it cheaper one way and wanted it. I would be inclined to see which way we could cooperate best with the carrier.

As to whether that would amount to this, that if the Southern Pacific built the cross-State line we would still leave the routing to the Southern Pacific, and if they wanted to take it through Alturas or Roseville, we would leave it to them: I would be inclined
2111 to do that, to let them route it by any of the three alternatives, if they had them all.

The sum of this testimony concerning the routing of traffic is that we give it to the road that serves our mill.

Forty per cent of our lumber is sold from our Chicago—we have a lumber yard in Chicago and do a very large business there, and forty per cent of it is sold and distributed out of that depot. (3836.)

Comr. MCMANAMY. Now, suppose that the cross-State line is built by the Union Pacific, and your lumber was routed that way. In both cases you have a through line to Omaha. Are you losing anything or gaining anything either way?

A. Well, you are supposing something that wouldn't be, because we wouldn't route it that way. We would send it through Ogden via the Southern Pacific.

There would be an advantage in it, as far as the one-line haul is concerned. It is true that the same number of lines handle our freight.

As to whether on my theory it would be better if we just had one railroad system throughout the country: Well, I think that would be a fine thing, and then we wouldn't have the financial crimes that have been perpetrated upon us, like duplication of freight all over this northwest here, the Milwaukee Railroad building a road that broke itself and broke the two Northerns. That's what I don't want to see here, misdirected effort, that's my idea. (3837.)

2112 C. E. DAY thereupon resumed the witness stand, and testified further as follows:

Direct examination—Contd.

Q. (Mr. DEY.) Now, Mr. Day, you were in the course of an analysis of Mr. Newell's Exhibit No. 16. Will you proceed at the point where you left off, which I think at that time you were dealing

with Mr. Newell's use of averages on specific traffic that doesn't conform to average.

A. Before I take up that matter I would like to explain more fully the matter of direct cost percentages that I have obtained, and the method that I use a great deal to describe in this manner. I take an average month's traffic and I find that costs a certain amount of money, then I take another month that is, say, 40 per cent higher than the average, and, as an example, it may cost 22 per cent more money. Then dividing the 40 per cent into the 22 per cent gives me 55 per cent as the cost of the added business. Then I make comparison with a month that is lower than the average, say 20 per cent lower, and I find that the cost in that month is only 10 per cent lower than the average month, so I divide that 10 by the 20, and that gives me 50 per cent as the cost (3838) that we have saved by that business dropping to the 20 per cent. I get a different result for each month—that is, I have 12 different results in a year—and then I use the mathematical rule for getting the most probable value of that percentage, and those are the percentages which I have given in this analysis. That is, if the expenses had exactly fluctuated, month after month, this formula would give you the exact percentage as a measure of the cost of the business that is added, or the amount that we would save if it were subtracted from our traffic.

2113 I now refer to Mr. Newell's use of averages to specific traffic that does not conform to average. Mr. Newell has based all his calculations on a train consisting of 56 cars. I used the month of October, 1927, and found that the average length of trains, not counting caboose, between Eugene and Ogden to have been—eastbound, 67 cars; westbound, 62 cars.

The corresponding efficiency of loading represented by these cars was found to range within the following limits on the various districts:

Eastbound, 55 per cent to 97 per cent;

Westbound, 52 per cent to 75 per cent.

If Mr. Newell had used these numbers of cars per train he would have obtained a lower direct cost in his calculations.

The error of Mr. Newell's application of average empty haul cost to the specific hauls under consideration, has been (3839) fully covered in the testimony of Mr. Burckhalter and shows that Mr. Newell has overestimated the direct cost in this particular.

In conclusion: It is to be observed that all the defects in Mr. Newell's estimate, which have been observed, point to the fact that Mr. Newell's cost data are too high.

By having his cost level too high, considering the Southern Pacific aspect alone, he underestimates the net revenue earned from the Oregon business which it is proposed to divert to another carrier, and, therefore, if the Southern Pacific Company is to be recompensed for the net revenue which it will lose on account of the proposed

diversion of traffic it will have to receive a greater division of the through rate than that proposed by Mr. Newell.

Based on the hurried study, it is my judgment that Mr. Newell's direct cost should be reduced at least one-third due to
2114 his cost data alone. Also his direct cost should be reduced further by the amount representing the erroneous cost of empty car movement.

Mr. Examiner, you requested yesterday what this would produce in the final result, and this is part of the testimony, leads up to that.

To carry out Mr. Newell's plan the Southern Pacific Company would have to receive a much greater division of the through rate as represented by these corrections. Now, if the (3840) Southern Pacific Company participates in the gross revenue to a greater extent than that figured by Mr. Newell, it naturally follows that the Union Pacific will receive a lesser net return, upon which it must depend for its justification in building the cross-State line.

In Tables XXI and XIX Mr. Newell has shown the Union Pacific aspect on a rate division that contemplates making the Southern Pacific whole approximately for the loss in net revenue which it suffers on account of the diverted traffic, and at the same time it leaves all the benefits to the Union Pacific to support the Union Pacific's investment in the new construction.

In order to show what effect these changes would have on Mr. Newell's final conclusion, I have prepared an exhibit. (3841.)

(Said statement was thereupon received in evidence, marked "Defendants' Exhibit 108, Witness Day.")

This exhibit is entitled "Southern Pacific Company's—Pacific lines—correction of Mr. Newell's Exhibit 16, etc."

In this exhibit I have shown the results for the first year and the fifth year. I start by taking Mr. Newell's net return for diverted traffic and deduct from it the amount representing the empty haul included, and that leaves a net without the empty haul feature. I then take off one-third, which represents the correction on
2115 account of his cost data, and that leaves a corrected figure for the diverted traffic. I then take his direct cost for newly created traffic and deduct one-third on account of the cost data, leaving a corrected direct cost; subtracting that from his gross earnings produces the increased net earnings on account of traffic created. I then recap these two savings and add to it the net passenger revenues shown on his page 141. The total of these three items is then reduced by the amount representing the indirect expense and taxes on the cross-State line, leaving the total return. (3842.)

It will be observed from the exhibit that the corrected results show that the Union Pacific will earn a return in the first year amounting to $126,313.00, and in the fifth year $382,267.00. The return in the first year based on the new investment of $9,908,000.00

represents an annual return of 1.3 per cent in the first year and 3.9 per cent in the fifth year.

Mr. Newell's conclusions show a net return for the first year of 4½ per cent and the fifth year 8.4 per cent.

Q. (By Mr. DEY.) Now, are you prepared to say that the reduction you have made in his cost data is all the reduction that should be made, or that a careful analysis of his statement would require more to be made?

A. That is true; I have only made corrections or studies of certain features of it, and from that I conclude that his cost at least should be reduced one-third, and fuller studies might develop even more than that.

It is not possible that this fuller study might disclose discrepancies the other way that would balance out the changes that I suggest. I didn't seek discrepancies that would be in our favor. I just studied the ones that seemed to lend themselves most readily to examination, and they all point that same way.

2116 Exam. ROGERS. You have on the bottom here "Return on (3843) $9,908,000.00." I take it that that is on traffic that Mr. Newell based his calculations on?

A. I am just correcting——

Exam. ROGERS. Accepting his traffic data?

A. Well, I am just applying the corrections to his calculations. It is true that I am accepting his estimate as to what this line will cost, $9,908,000.00. It is true if every other testimony shows it will cost $11,000,000.00 to build it, that will produce the percentage of earning. I have accepted all of the traffic that Mr. Newell took into consideration in arriving at his earnings, and I have only made a correction for the empty car haul as Mr. Examiner intended, that is, that the Southern Pacific furnishes all the empties to them, as they are now doing, and the subtraction that I made is only the subtraction with the figures in the haul over the two routes.

I have not allowed the Southern Pacific any compensation for handling empties for some other carrier.

Exam. ROGERS. I take it that we should have said you used (3844) the traffic figures, rather than accepted them.

A. Yes.

As to whether I can tell from my consideration what portion of the operating expenses for maintenance of way and structures vary with the traffic, or vary with use: I have made studies of my own, using the formula that I have quoted of the A. R. E. A. It is also known as the Yeager formula. I believe that that is as good a measure of it as can be found.

Exam. ROGERS. What is that? What does that amount to?

A. Well, it includes the full schedule of percentages to be applied to the different items. That is, superintendence would be one per cent, and track-laying and surfacing another, and on each item of maintenance of way. When applied to all the railroads of the

2117 United States it worked out 33 per cent. The percentage

works out differently depending upon the amount of business that is being handled on the road.

As to what was the maintenance of equipment expense: That formula doesn't cover maintenance of equipment. Mr. (3845) Newell has assumed 100 per cent. I haven't analyzed it to see what it would be, but it is my judgment that it would be considerably less than 100 per cent.

Exam. ROGERS. Well, have you at any time considered the case decided by the commission in volume 70 of the commission's reports, in regard to settlement under section 209 of the transportation act? There I think they used 80 per cent for maintenance of equipment.

A. Yes; that is the percentage they used. I have used that, but I have never verified it.

They used one-third there for the maintenance of way and structures, that is the average that Yeager got when he applied this to all the railroads of the United States.

There is another point that I haven't brought out here, and that is that as business increases we get a greater use of what locomotives, for example, that we have. That is, I can take a lean month and find that we will handle a certain number (3846) of tons per locomotive, then I can take a busy month and I find that we handled more tons per locomotive, and added business doesn't add even locomotives at the full measure.

Exam. ROGERS. Now, as I understand Exhibit 108, if we want to get the total corrections, according to the Southern Pacific's views, in Mr. Newell's exhibits, we consider this exhibit together with Mr. Burckhalter's testimony about the cars, about the empties?

A. In addition to this, Mr. Burckhalter covered the cost the Union Pacific would suffer on account of having to get the cars back to this interchange, and that is in addition to this.

2118 If we use that, that would run into a million dollars or so.

Mr. DEY. That hasn't been used?

A. This is just what you asked for.

Exam. ROGERS. I know.

Mr. DEY. It is only the saving that Mr. Newell erroneously figured on the empty car haul on cars that are not hauled empty by the Union Pacific.

Exam. ROGERS. What is it?

Mr. DEY. This one deduction up here of $180,000. That is the only figure of Mr. Burckhalter's that this witness has used, the only deduction (3847) he has made on account of Mr. Burckhalter's testimony. And that was a saving that Mr. Newell erroneously figured on cars that never moved that way, that couldn't move that way unless hauled out from Omaha at an expense of a million and a half dollars or so.

Cross-examination:

As to whether my Exhibit 108 was compiled on the basis of Mr. Newell's original exhibit, or whether I took into account his Exhibit 107 introduced in this case today, it is based on the Exhibit

16. And there will be some substantial correction to be made to my exhibit to make it correspond with Mr. Newell's Exhibit 107. To the extent that Mr. Newell has included additional revenues in Exhibit 107 that were not included in Exhibit 16, my exhibit doesn't show the correct return on—assuming my corrections to be justified.

Exam. ROGERS. Why not?

Mr. ELLIS. There is additional revenue that has been added by Mr. Newell since this computation was made.

Mr. DEY. They came into this case with one traffic set-up
2119 (3848) incorporated in Mr. Newell's book. Now today a new traffic set-up came in here involving Idaho and Alkali Lake, and one thing and another, and, of course, Mr. Day has not considered that later set-up; he hasn't had an opportunity.

Mr. ELLIS. I am not criticizing Mr. Day. I just wanted to develop the fact that that wasn't included.

Exam. ROGERS. Well, can you, Mr. Day, give consideration to that exhibit, or will that be out of the question?

A. That would be a little bit difficult. My conclusions are drawn rather by the use of Mr. Newell's cost data of Southern Pacific figures, and I don't believe that I could make that.

Comr. MCMANAMY. I am wondering if the traffic set-up, so-called, introduced by Mr. Newell today affected these figures?

A. What set-up?

Comr. MCMANAMY. Mr. Day referred to the new traffic set-up that Mr. Newell introduced today. In what way will it affect these figures?

A. If they developed that traffic and would profit from it that would show a greater return.

Comr. MCMANAMY. This only refers to diverted traffic, doesn't it?

A. No; that refers to all the traffic that Mr. Newell contemplated in his Exhibit 16. It was diverted traffic, as well as that originated on the line.

Exam. ROGERS. The only change would be in the created (3849) traffic, wouldn't it?

A. No; there is a change in the diverted traffic.

2120 Mr. DEY. Well, he doesn't——

A. I mean the cost due to the diverted traffic is changed.

Exam. ROGERS. Yes; if I understood Mr. Newell's exhibit here introduced to-day, he simply increased what he called created traffic.

A. In Idaho?

Exam. ROGERS. Yes.

A. Yes; but he has some created traffic on this line that he has figured in this set-up.

Mr. DEY. You have taken the diverted traffic and the created traffic that was used by Mr. Newell, and which he took from the Teutsch exhibit, and from the original Wiggins exhibit, and that is the basis of Mr. Day's statement, or exhibit. Now, then, in so far as additional created traffic that has come in here in Exhibit 107,

or 108, or whatever it is, then of course, it requires some modification of this exhibit.

Exam. ROGERS. What I was getting at, the criticisms that Mr. Day has pointed out in Mr. Newell's exhibit are not involved in this Idaho traffic, are they?

A. Only by inference, that you might infer that because the (3850) cost data were too high on the other lines they might be too high in the computation in this second set-up.

Comr. MCMANAMY. This second so-called set-up was simply an analysis of figures that were introduced before, brought in by Mr. Newell, as I understand it now.

Mr. ELLIS. No different set-up. We made our reservation at the time it was introduced, and told the carriers that we wanted to bring it altogether in the final statement.

Mr. DEY. Well, if it isn't a different set-up why was it
2121 necessary for Mr. Newell to come in with any additional figures, unless he is considering additional traffic to what he first considered?

Mr. ELLIS. Because he had to apply cost figures to the Idaho traffic, which he didn't have at first.

Exam. ROGERS. What was the object of your question of the witness as to whether his figures were based on Mr. Newell's Exhibit 107?

Mr. ELLIS. Simply to develop that the earnings on the investment which he has shown would be increased by adding the Idaho traffic, which was not in Mr. Newell's original set-up.

Exam. ROGERS. Under the heading of "Created Traffic" on Exhibit 108?

Mr. ELLIS. Yes; that is all.

Mr. DEY. It would run the net from 8 per cent to 17, by bringing in additional traffic. (3851.)

Q. (By Mr. ELLIS.) Now, Mr. Day, I believe you replied to the examiner's question that there would be no compensating discrepancies to contrast with those which you believe to exist and have pointed out. What would be the result of your cost figures—or Mr. Newell's figures being too high on the revenues from created traffic moving from points on the line and moving from Idaho across the line?

A. Well, that is just as I showed you on this exhibit—it shows a larger net revenue on the created business. That is, that is shown on Exhibit 108. So it does have that compensating effect on the net but not on the cost.

Q. Then you think the net result is this, that if they are too high, if his cost figures are too high, it will reduce his claim of earnings on the traffic originated in western Oregon, but it will reduce
2122 the earnings on the short haul traffic from Idaho and from points along the line?

A. If I understand your question, I don't think that is true.

Q. Now, with reference to the fuel costs, which you say are erroneous, it is a fact, is it not, that Exhibit 16 takes into account the entire fuel costs of the Oregon-Washington Railroad and Navigation Company, as you understand it?

A. I believe that is explained by Mr. Newell, but I, of course, don't know. (3852.)

Q. Well, now, I believe it is your testimony that in applying those fuel costs to the particular case that you called attention to, or the particular hauls, you have found them to be too high?

A. That is true.

Q. If that is true, and Mr. Newell has used the average, or used the cost for the entire system of the Oregon-Washington Railroad & Navigation Company, must it not follow that those same cost figures for Newell would be too low is applied in other places or on other hauls?

A. No; it doesn't follow.

Q. Well, if he has used the total, which would be an average figure, would result in an average figure, and you say they are too high in those certain places that you have described, must they not necessarily be too low in other places?

A. If he had changed his data by consideration of the fuel that was used between Ogden and Eugene and got an average cost in that manner, then when he multiplied it back what you say is true, but he got his data on another line and he applied it to the Southern Pacific, and being too high it would be too large a result on the Southern Pacific hauls.

2123 Q. Well, would you be in a position to state, if they are too low in other places, just where they would be too low, or on what sections of the haul the fuel costs of Mr. Newell would be too low? (3853.)

A. Well, I don't think they are too low on any of the hauls on the Southern Pacific.

Q. You think that on any haul that you could pick on the Southern Pacific Mr. Newell's fuel costs would be too high?

A. Well, where the fuel consumption is important. I picked out the two points where it is the most important; that is, we burn the most fuel on that climb between Eugene and Crescent Lake, and the other next most important point is between Roseville and Sparks, and because they have greater importance I made the tests at those points. On the level grades or on the down grades where it has no great weight I didn't consider it.

Q. Now, in the recent grain rate case, Mr. Day, did you not introduce a number of exhibits tending to show the high cost of fuel on the Southern Pacific lines, and to show that Mr. Newell's cost figures were entirely too low to apply to Southern Pacific operations?

A. His cost data were too low?

Q. Yes.

A. Not his direct costs. I never thought his direct costs were too low.

Q. Well, didn't you take the position, and so testify in that case, that his cost figures as a whole were too low to be applied to Southern Pacific operations?

A. I didn't take that stand; no. I offered testimony to show that the costs in Oregon were higher than the costs of the (3854)
2124 system as a whole, largely on account of local service and branch line service, and the question here involved is the hauling on the main line in through trains, largely, and it is a different matter.

Q. Well, didn't you introduce exhibits to show the high relative costs of operating the Southern Pacific lines, to show high fuel consumption?

A. I made comparisons between Oregon and the system as a whole, and I found that they, compared to the system, are higher in Oregon.

Q. Well, is it not true that the fuel costs of your company compared with those of the Oregon-Washington Railroad & Navigation Company are very much higher?

A. Mr. Newell shows that in his exhibit, but I don't know where he got the figures. (3855.)

Exam. ROGERS. What case are you talking about?

A. He is talking about the——

Exam. ROGERS. The grain case?

A. The grain case.

Mr. ELLIS. Well, Mr. Newell has used the same figures in this case, the same cost figures.

A. I don't know whether Mr. Newell used the averages, including all branch-line operations, or whether he used just main-line operations. We are speaking now of the main-line operations.

Q. Well, did you ever made a check of the fuel costs on the Oregon-Washington Railroad & Navigation Company to see how they compared with your fuel costs?

A. Well, I have seen comparisons, but I don't——

2125 Q. Well, do you question Mr. Newell's statement in his report to the effect that train fuel per thousand gross ton-miles on the Oregon-Washington Railroad & Navigation Company system in Oregon is 53.9 cents, as against 73.2 cents on the Southern Pacific lines in Oregon?

A. I don't question Mr. Newell. I don't know how he got those results. I say possibly the high results he got on the Southern Pacific, because he considered fuel and branch line operations, which are always more expensive than through line operations.

Exam. ROGERS. As I get it, you take all the lines in Oregon (3856), you get one figure, where if you take this haul to destination you get another one?

A. Exactly. If you take the main line operations you get one value for your fuel oil, if you take branch lines you get another

value, if you take combined main and branch you get an intermediate value.

Q. (By Mr. ELLIS.) Did you not take the position in the grain rate case that Mr. Newell's train-mile costs when applied to a heavy car of wheat should be calculated on the basis of the tonnage, and that the same amount should not be allowed for each car regardless of the weight, whether light or heavy?

A. I was talking about the train cost element, and the trains are made up on the basis of the tons and not cars, and it was my position then that Mr. Newell should have used as a measure of the train costs tons rather than cars. That is, he figured a 56-car train of empties, and a 56-car train of wheat at—I think 52 tons, was it?—or something like that—and that resulted in a train load that exceeded the ratings of the locomotives used on the district. (3857.)

2126 PORTLAND, OREGON, *August 24, 1928.*

C. E. DAY thereupon resumed the witness stand, and testified further as follows:

Cross-examination—continued.

I have not made any attempt to apply the correction of my Exhibit 108 to the additional figures submitted in Mr. Newell's 107.

Q. Well, would you be willing to agree with me that the percentage of return the first year would be increased from 1.3 to approximately 3.2 per cent return if those figures were so applied to Mr. Newell's Exhibit 107 figures? Does that seem to be about correct?

Mr. DEY. Well, Mr. Commissioner, I object to that question, because it is obvious that the witness has had no opportunity to make any figures in that regard and how can he possibly agree with counsel that a certain percentage or a fraction thereof to be applied would be correct?

Comr. MCMANAMY. Can't you change your question, Mr. Ellis, to find out if the witness has made figures?

Mr. ELLIS. Well, I asked him if he had calculated it himself. Have you sufficient information so that you could approve the figure or dispute it in any way? (3858.)

A. Well, I don't know what figure you refer to when you—that is, you mean could I apply a correction to Mr. Newell's figure pertaining to this added traffic that you figure in this Exhibit 107?

Q. Yes; you agreed with me yesterday that the additional figures submitted in Mr. Newell's Exhibit 107 would change
2127 your percentage of returns from, and I was wondering if you would agree with me that it would change it substantially—in fact, about double the percentage of return which you have shown on Exhibit 108?

A. Well, it would depend on how much traffic you were originating with that different cost. Of course, not having made a test, I don't know whether it would double it or make it any other percentage of correction. If Mr. Newell's cost data is too high on the Southern

Pacific, it might be too high on the Oregon-Washington Railroad & Navigation Company or Oregon Short Line, but I have only tested it in relation to Southern Pacific costs.

It is true that if they were too high on the Oregon-Washington Railroad & Navigation Company I would of course make the same correction of one-third reduction on the Oregon-Washington haul that I made on the Southern Pacific.

Mr. DEY. I don't know—let me get that clear—I don't (3859) know as I understand that question aright. If they were too high on the Oregon-Washington Railroad & Navigation Company you would make one-third reduction?

A. No; it would take a correction.

Mr. DEY. Well, he said one-third reduction.

Mr. ELLIS. The correction would depend, you think, on the exact operating conditions that were found to exist on the particular section of line?

A. It would depend, in the first place, on the volume of traffic that was contained in that computation, and it would also depend upon how much the figures are to be—the cost data are to be revised downward.

Q. Will you explain a little more clearly how you arrived at the figure of one-third which you have applied?

2128 A. That one-third is a judgment that I formed after studying particular data, that is, the one that I have enumerated. I find that he is too high in those, and that sizes up about one-third to—justifying a reduction of one-third.

Q. You checked certain individual items, and because you found they were, in your opinion, too high, you assumed that all other items were too high and made the correction accordingly?

A. I made specific deductions as to certain other items. There are other items that I didn't check that I know would result (3860) downward as well, but I don't know just how much they would be revised downward.

Q. Well, in making your check, Mr. Day, didn't you pick out the item which you expected you would find to be the highest or the most out of line with your ideas?

A. No; I didn't. I picked out fuel because Mr. Newell's computation has it all in the one item of foot-tons, and it was a comparatively easy matter to work back and find out what the fuel amounted to in his foot-ton calculations, and, also, fuel consumption is a very definite thing in actual performance, and I could get something—a real, true comparison; that's the reason I chose that. I would like to have compared his labor cost, but his labor is broken up into different parts, and to work the labor item out of his cost unit isn't so simple, and I hadn't the time to make that comparison as respects his labor costs, which would be also too high.

Q. What percentage of the total number of accounts did you actually check out in detail?

A. Well, they are all in the testimony, just what they are, and the percentage can be worked. I didn't figure the percentage out.
2129 I should say it is not a very minor percentage of the total. Fuel is one of the big items. The train service expense is a big item. Of course, that includes the fuel. (3861.) As to whether I checked more than ten or fifteen per cent of the total number of accounts entering into Mr. Newell's study, I tested superintendence, and dispatching, station expense, fuel, enginemen, trainmen, locomotive repairs—no; I believe considerably more than fifteen per cent I have tested. I think I tested about 75 per cent of the number of accounts—no, 75 per cent of the dollars and cents, that is, 75 per cent of the money involved. That would be less than 75 per cent of the number of accounts.

We have some accounts that are of minor importance. (3862.) As to whether many of the accounts that I discussed in my testimony were of rather minor importance in the total amount involved, well, superintendence is a minor account, but he was nine times too high and I thought it was well to bring that out.

I wouldn't expect year after year to find the same result that I did find with respect to these accounts, not exactly. As to whether I did expect some fluctuation to exist, over a period of years, as business increases our costs get lower upon a unit basis.

Q. And if you took a large number of carriers and made a comparison or study over a period of years, would you not get a result much closer to the one which Mr. Newell obtained through his study?

A. I think it is an—if you refer to the method that Mr. Newell used in getting his direct expense by using data from various railroads, I think that is an inaccurate way, because there are so many other elements that affect cost besides traffic that the result
2130 that he gets by his method is purely accidental and is not a measure of the density factor.

Q. Referring to your exhibit, now, your second item, "Deduct for empty car haul," did you figure that yourself, or is that the figure that you took from Mr. Burckhalter's testimony?

A. That is the figure I took from Mr. Burckhalter's testimony, and it covers just the empty car—that is the sixty per cent item of empty cars that Mr. Newell figured that would move over (3863) that line.

Q. Well, does that figure contemplate that there will be no empty cars hauled over the cross-State line from Ogden?

A. Yes; that figure contemplates none of these cars came from Ogden over the Alturas line, and——

Q. Well, if, as a matter of fact, the record shows that there are seven thousand empty cars delivered to the Southern Pacific at Ogden which could most economically be used in handling Oregon traffic, would you change that figure in any respect?

A. Well, Mr. Burckhalter prepared that figure after a study of the interchange at Ogden, and his decision was that none of those cars found its way up into Oregon. It is true that some cars move westbound through the interchange, but those cars can be used at any

point between Ogden and Portland. In fact, a lot of those cars are used up on the Westwood branch.

Mr. DEY. Pardon me just a moment. If the commissioner please, Mr. Huggins, who testified yesterday, has just come in and states that he made a statement yesterday with respect to his shipments that was not correct, and he wanted the opportunity to change it. He states that he testified that his carload shipments amounted to 1,500 for the year 1927, and he desires to have the record show that it was 2,500. It isn't a matter that is material one way or the other, but apparently he is (3864) conscientious about his testimony and wanted to have that appear.

Comr. MCMANAMY. That may appear in the record. (3865.)

2131 Q. (By Mr. ELLIS.) If there is already a heavy surplus of empty cars in California, you would not expect to haul the cars from Ogden down to Los Angeles or San Francisco and then replace them in Oregon by cars delivered through the El Paso gateway, would you?

A. Well, I didn't offer any testimony in regard to the empty car naul. I thought Mr. Burckhalter covered all of those points. But——

I have adopted Mr. Burckhalter's figures. I also vouch for them, having participated in the calculation. I did not help Mr. Burckhalter arrive at the results he has shown in his Exhibit 103. (3866.)

Q. Well, the empties delivered at Ogden are about half as many empties as Mr. Newell had figured would move over the cross-State line, and if those cars were hauled over the cross-State line, instead of as you claim they would be hauled, that figure of $180,000 would be cut about in two, wouldn't it?

A. Well, I would admit that half of them, or any one of them, came from Ogden up to points in Oregon. Those cars are interchanged for different reasons, and the return of empties, or the forwarding of empties through Ogden may not get as far as California. There is no record to show how far those cars moved west.

I really don't know where those cars go. Nobody knows where all of those cars go. We know that there is a demand for such cars in large volume at Fernley for use on the Fernley branch. As to whether anyone knows where the cars made empty in southern California go for reloading, they know the general flow of empties, that they do move north over the Tehachapi, in large volume,

2132 finding their way up this way. But individual cars move so many different ways that complete knowledge of it could only be obtained after very intensive study. They go to the nearest point where a load is available (3867); that is the practice. And the same rule would hold good on these empties available at Ogden; they would go to the nearest point where load was available for return haul. After they pass Ogden they would be diverted at the point where they were first required. They would not be expected to go to some point in western Oregon for such a point could not be the nearest point because that is the most remote. Whether it would be

the most remote with the cross-State line constructed, that is a different matter. Mr. Newell figured that we could save on the haul of the empties from Ogden up to Crescent Lake. I don't know that that changes the picture. As to whether I am assuming that the line is not there, so the cars could not move, Mr. Burckhalter has covered that in his figure, which turned the profit into a red figure. That is, if they move from Crescent they would probably come from Omaha and the Union Pacific would have the entire cost to support.

Q. Now taking your next item, Item No. 3, after deducting the empty car haul, which we have just discussed, from Mr. Newell's net earning, you arrive at a cost figure. I am wondering (3868) how you can make a deduction such as you have from a figure of net earning and arrive at a figure of cost.

A. The process there was that Mr. Newell's rate or cost level was too high, as represented by this one-third, and if all of his data were reduced to a level one-third lower, the subtraction would also be one-third lower and the correction would apply in that way.

2133 Q. Well, the gross earnings are not affected by your figure of cost, are they?

A. Gross earnings is not in that $715,340. That is the saving that Mr. Newell proposes to make on the diverted traffic, and it results from the difference in the costs by the two lines there. Revenue is not in that figure at all.

Q. The first figure that you have started with is an earning figure purely, Mr. Newell's earning from diverted traffic?

Mr. DEY. It really means saving, doesn't it?

A. It is the saving that Mr. Newell has assigned to the Union Pacific by his process of making the Southern Pacific haul and leaving all of the savings go to the Union Pacific, and that is merely the difference in the cost by the two lines.

Q. (By Mr. ELLIS.) Well, that figure is derived from a division of rates as proposed by Mr. Newell?

A. He divided the rate so that the Southern Pacific would be made whole. Now if he finds that the Southern Pacific costs are higher, he would have to change his division and throw a (3869) less amount in to the Union Pacific item, which would work this way.

As to whether that would really affect the one-third, if his cost level is too high, 50 per cent too high, then the difference in cost on the two lines by subtraction would also be 50 per cent too high. As to whether I worked that out to see if the result would be as I say it is, or whether I have merely taken this process because it was the simplest way I could see of suggesting my idea and because it avoided some detailed calculations, I made this calculation:

2134 I start with Mr. Newell's cost via the Alturas line, on page 117. There he is making the calculation for car of fir lumber destined to Omaha, making use of the Alturas line, and he first sets up the gross earnings of the Southern Pacific based on their present division, and he subtracts from it his cost, and that

leaves a net earning which he intends to preserve for the Southern Pacific.

Then further down he computes the Southern Pacific's earnings when it makes use of the Crane line, and in order to preserve that same earning he arrives at his 27 per cent as the proper division to the Union Pacific.

Now I have made these same corrections, Mr. Examiner (3870), that you suggested, and carried it through to see what this percentage would be; that is taking out of Mr. Newell's costs his empt haul element that we say is erroneously employed, and also making this one-third correction. I start with this $253.75 of the Southern Pacific's share on the present basis, and I subtract from Mr. Newell's direct cost of $174.40 the amount represented by the empty haul movement, $44.52. That leaves $129.88, without the empty haul feature.

I have one-third off of that, because of the rate level—rather, the cost data level—and that, subtracted from the revenue that the Southern Pacific now receives, leaves a net earning of $167.18.

Then I start again with his computation via the Crane line. His direct cost is $48.54, less the empty haul, $3.49, and less the one-third for the cost data of that balance leaves $30.03, the cost to the Southern Pacific on the new line. Then I add to that the net revenue that we are now earning on that business, and that brings that we must receive $197.21 in order to preserve our earnings.

Now that $197.21 is 41 per cent of the gross revenue; that
2135 is, we would have to receive a division of 41 per cent instead of 27 per cent to protect our present earnings from that traffic. Now Mr. Newell's figure of seven hundred——

Mr. DEY. To protect your what?

A. Present earnings on the business that we haul. (3871.)

Mr. DEY. Present net?

A. Our present net earnings. Now it is figures that are remaining after this division that Mr. Newell carries forward and it represented in that $715,340. As I understand it, that merely represents the economies that result from the two lines, and he leaves a little bit to the Southern Pacific in his plan but it is a very small amount compared to the gross, and it is within the probable error of his calculations. So I have just interpreted that seven hundred fifteen as practically making the Southern Pacific whole and throwing all the profits into the Union Pacific, and therefore it only represents the economies that there are from the two routings, and gross revenue is cast out—it hasn't any bearing in that figure.

Q. (By Mr. ELLIS.) Are you sure you have finished your calculation and got down to the final result?

A. Which calculation do you refer to?

Q. Is that all there is to the calculation to get the——

A. To which calculation do you refer?

Q. Well, the one that you went through to get the results in Exhibit 108, arriving at your figure of one-third.

A. You mean getting the 41 per cent, is that the final calculation to get the 41? Is that the question?

Q. Well, in arriving at the effect it will have on the Union Pacific's share of the total earnings. (3872.)

A. Why, if I understand Mr. Newell's figures right, that is substantially it. It is not exactly, nor my one-third is not an exact figure; is it an approximation.

2136 Q. Didn't you, in arriving at this deduction of one-third in making the calculation which you have just described, take out the empty car haul and then again take it out as a separate item under your Item 4?

A. That is just what I did not do.

Q. Or under Item 2?

A. That is just what I did not do. I took off the empty haul first, and that is figured in at the same rate as all the other items in seven hundred fifteen, and that left the cost on Mr. Newell's cost basis for the cost without the empty movement. Then I say his cost level is too high and therefore that should be depreciated by one-third.

Q. Wasn't what you really did was to take Mr. Newell's earnings figure, treat it as a cost figure and then deduct this one-third for the corrections, and then convert it back into an earning figure again and present that here as the true earnings which would result?

A. Mr. Newell's figure is an earning figure; it is not a cost figure, it is an earning over and above cost that he assigns to the Union Pacific by his process of dividing the gross earnings so as to throw it into the Union Pacific's revenues.

Q. Are you contending here, Mr. Day, that a reduction in the (3873) cost figure that Mr. Newell used would decrease the net earnings?

A. It would decrease the net earnings on the diverted traffic, yes; that is presuming that his cost data is also too high at the same rate on the Short Line as it is on the Alturas line.

Q. Would it not, in fact, result in increasing the net earnings, considering the total haul?

A. No.

2137 Exam. ROGERS. Are you talking about savings?

Mr. ELLIS. No; I am talking about earnings now. We are not talking about savings; I am talking about earnings.

Mr. MCCULLOCH. Net earnings.

The WITNESS. That is kind of confusing there. The whole calculation is to figure an increase in the net earnings by providing a decreased cost. They are supposed to be the same thing; that is, the increased earning as a result of the decreased cost, and they are the same thing; that is, the money is the same thing in these calculations.

Q. (By Mr. ELLIS.) Well, you say Mr. Newell's cost figures are too high; assuming that they are too high and you reduce them, can that possibly decrease the net earnings on the total haul?

A. It will do exactly that thing. I believe you understand, Mr. Examiner, that if he figures a cost around the Alturas (3874) that is twice too high, then he had figured another cost via the Crane line that is also twice too high, subtracting one from the other he gets a difference that is also twice too high. That is, all the figures are too high, and to subtract the remaining by subtraction is also too high. Do you follow me?

Mr. ELLIS. I can't follow your logic.

The WITNESS. Well, suppose in round numbers that via the Alturas line it cost $120.00 a car to move by that route, and supposing it cost $180.00—rather, $80.00 via the Crane route; you would subtract and you would get $40.00 as the savings on account of these two routes.

Now then, I take one-half of the first cost, say that the Alturas cost $60.00 and the Crane route $40.00, the saving then is $20.00.

Now $20.00 is just one-half of $40.00; that is, you have reduced your earnings by reducing your cost data.

2138 Q. You are now decreasing savings and not net earnings via the cross-State line?

A. Well, that is what all of this testimony is directed at, is the savings or the economies that are going to result by the cross-State line. It is not proposed to reduce the rates, as I understand it, on account of it, and therefore the net earnings and the savings are identical.

Q. What I am getting at is this: If it costs $100 to carry a (3875) car from Crescent across to Crane, that is, if Mr. Newell has figured it cost $100, and you say he is one-third too high and it only cost $66.00 to haul that car, you have got your difference of $33.00 to add onto the net earning derived from that particular haul?

A. To the Union Pacific?

Q. Yes.

A. Yes; but that is not the problem.

Q. You were not giving particular consideration to that phase of it at all?

A. Well, that hasn't any bearing on the problem.

Exam. ROGERS. As I understand it, Mr. Day, you haven't made any computations as to this method applied to the Union Pacific?

A. Well, yes.

Exam. ROGERS. All your computations are made for the Southern Pacific?

A. No. I checked his data on the Southern Pacific, and then I have made a correction on the basis that everything was wrong in that same rate. And this exhibit 108 is the Union Pacific's aspect, because it leaves nothing to the Southern Pacific over and above its present earnings. (3876.)

Q. You have made a correction by reason of the fact that you say the trains between Eugene and Ogden average 62 to 67 cars, instead of 56 cars that Mr. Newell has used, and assumed that all of his cost units are correspondingly incorrect?

2139 A. I believe my testimony shows that I was criticizing Mr. Newell for using averages to specific conditions where they didn't conform to the average, that is, the average train was considerably longer than he used, and if he had used the longer train he would have had his costs greater in that particular—or lesser, rather.

Q. I wish you would refer to page 67 of Mr. Newell's exhibit 16, and point out just which of those items are affected by that error which you say Mr Newell has made, using the average figure 56?

A. That pertains only to the first item on ——

Q. The item of train mile?

A. The item of train mile.

Q. Instead of dividing 96 by 56, as Mr. Newell has, what figure would you divide it by?

A. Well, if I were doing it I would have a different figure for each of the different divisions; that is, where I found they were running 70-car trains, I would use that 70-car, where I found they were running 100-car trains I would use the 100-car. But I know what you are leading up to—if I were going to use an average, and had to use an average—which I don't (3877) think is right—I would divide by that 67, or whatever I used in the testimony.

Q. Well, after you had done just what you say you would do, when you got through and averaged them again you would get right back to the same st .rting point, wouldn't you, give you the same total?

A. Oh, no; because all of them are higher than 56. Its average aspect, as I believe I pointed out, was 38 per cent higher—or his was 38——

Q. Well, can you state how much correction you would apply to that first item on page 67, "Eugene to Crescent Lake, load"—how much you would change that figure of $1.09?

2140 A. Well, that is about 20 per cent too high. I could take it off that way.

Q. In arriving at that 20 per cent figure, how many cars per train are you using?

A. Sixty-seven.

Q. Sixty-seven; is that the average, or is that the greatest number?

A. That is the average eastbound.

Q. And if the figure were 62, which is—is that the average westbound that you testified to?

A. Sixty-two? The one I used was eastbound. If I used the other it would make 10 per cent.

Q. What do you mean by "eastbound." Is that south? (3878.)

A. Starting out of here, south I use as eastbound.

Q. To San Francisco?

A. Yes.

Q. Now, have you not also criticized Mr. Newell's train mile figures by saying that it was too low by reason of the fact that it

should have been calculated on the basis of tons rather than on the basis of number of cars?

A. I don't know whether that would be too low or too high on that basis. My——

Q. Well, wouldn't that have just the opposite effect from what you have criticized here?

A. Well, that would depend upon whether the particular carload that he figured was more than an average carload over the districts. I don't know just how it would work out.

Q. Well, doesn't lumber load more than average?

A. No; I think it is pretty close to the average.

Q. Well, if the car loading was found to be above the average, it would have the effect of counter-balancing this situation which you say results in increasing the cost to some extent?

2141 A. Well, I say, I haven't made a calculation. I don't know whether it would—I haven't criticized that because of the result he got, but I said it seemed more logical to divide his train-mile costs on the basis of tons rather than on the number of cars, because the train was made up in units of tons and not units of cars. Very seldom the siding capacity limits the size (3879) of the train. In other cases it is the tons, and if it is a string of empties we haul more cars than we do if it is a string of loads, so the train element of cost it seemed a lot more logical to me to use the tons as the basis of division for his unit rather than the cars. As I said before, I didn't direct my criticism to the point that it gave too large or too small a result. It is a matter of logic.

Q. As a matter of fact, it did result in causing the cost to be lower than you thought it would be?

A. I don't know that.

Q. Well, you know that it would on carloads of grain, if the trains were made up largely of grain traffic, or heavy loading traffic, don't you? The result could not be otherwise?

A. Well, I think that when Mr. Newell applies a cost figure in this way to the empty haul I think his empty car cost is too high; and, also, it works the other way—if it is a loaded car, it would be too low.

Q. Well, then these refinements that you suggest in Mr. Newell's study wouldn't all result in reducing the cost, but some of them would result in increasing and some in reducing?

A. Well, we are talking about a very small item there. We are talking about $1.09 in a total of $28.25, and I suppose you could find that what you say has——

2142 Q. (By Mr. McCulloch). Mr. Day, leaving out the question of (3880) cost of empty-car haul, because you haven't personally analyzed and checked that, would you say that Mr. Newell's calculations of the direct cost of the loaded movements of lumber from western Oregon to Granger, Wyoming, via Crane and the cross-State line, via the Alturas, via the Roseville route,

and via the Portland gateway would be affected in any way so far as the parity of results were concerned?

A. I assume that I would say that there would be a difference in the comparison. If I understand your question, that is—the comparisons that he makes is the differences, and the differences would be affected that way.

Q. Well, if he uses the same method of ascertaining the cost of loaded movement by these four different routes that I have described from Eugene to Granger, one via Portland, one via Crane, one via Alturas, one via Roseville, will the comparative results—will the comparative showings of the cost of loaded movement via those four routes under the method that he has used be affected by any criticism you have made of his unit costs or of his methods of calculation? What I am getting at is this, to elaborate my question a little bit—on Exhibit 36 Mr. Newell showed the cost of such a movement via Portland to Omaha is $317.00, via Roseville $372.00, via Alturas $323.00, via Crane $290.00. Now, what I wanted to know is whether those comparative results of direct cost, loaded movement via the different routes, would be affected by reason of (3881) the method that Mr. Newell has used in ascertaining those direct costs, in your judgment?

A. Well, it would—I think I see your point—I don't believe Mr. Newell's analysis has given the proper weight to the different factors. That is, he has got the train-mile costs and the car-mile costs and the gross-ton-mile costs and the resistance costs. I don't
2143 think that the method that he used throws the proper proportion of the costs to the haul as they should.

Q. That is not what I had in mind.

A. Well, then another construction I can put on your figures is that if the $317.00 is too high, likewise the $372.00 will be too high, and they will be proportionately too high, but the differences will be also too high, so that when you subtract one from the other he gets a saving that is also too high, and that is a criticism that I have made in this Exhibit 107.

Q. Well, you are getting nearer to what I had in mind in this last remark. If he follows the same method of ascertaining direct cost for loaded movement via these four routes, according to your criticism he will ascertain a direct cost for loaded movement that is too high in every instance?

A. Sure.

Q. All right. But if he follows the same method of ascertaining (3882) the direct costs for loaded movement by those four routes, will the relation between the results he arrives at—would the relation between the results he arrived at be changed if you had followed your own methods of calculating direct cost for the movement between the same points over those four routes? In other words, would you by using your method of calculations arrive at a different relationship of the direct cost by those four routes than Mr. Newell has, even if his individual direct costs are too high in each instance?

A. You mean if I followed Mr. Newell's method——

Q. No; I mean if you followed your own method?

A. And my own cost data?

Q. Yes; for the four routes?

A. Well, that is pretty hard to say offhand, because of the way the grades and curves work into the problems on the different lines. They are more important on one line than they are on another, and if the basis of assigning the element of cost to foot-tons is
2144 higher than the uses I would get more costs on the hill; if it resulted in a lower figure it would throw a lesser proportion of the costs on the hill, and the comparison would be disturbed by my method.

Q. Well, Mr. Day, if you were undertaking to ascertain the direct cost for loaded movement between Eugene and Granger, Wyoming, for example, by these four routes, would you use a different fundamental method of ascertaining those direct (3883) costs for the different routes, or would you use the same fundamental method of ascertaining your direct cost by all four routes, if you were making the calculations?

A. I would use the same fundamental methods, but I would get the particular data that applied to the different points along the line, and instead of taking averages and applying it all the way from Eugene to Ogden I would try to be more specific and find out what the costs were on the different districts that were covered.

Q. Well, are you suggesting here that Mr. Newell hasn't used the same fundamental method in ascertaining his direct cost for loaded movement by those different routes?

A. No; he has used the same fundamental method. He has used the same cost data on the Southern Pacific, with minor modifications, that he has used on the other lines.

Q. Did you observe from a study of his Exhibit 16 that he used different cost units for different districts?

A. I say he used a different figure west of Klamath Falls than he did east of Klamath Falls.

Q. Well, then, hasn't he given consideration to differences in conditions on the different lines?

A. To that extent he has; yes.

Q. Now, was anything in your testimony, then, intended to criticize or suggest that the conclusions Mr. Newell has reached as to direct cost for loaded movement via these (3884) different routes for lumber from Eugene to Granger or Omaha were not reliable, the comparative results——
2145 A. Yes.

Q. The comparative costs?

A. Well, he hasn't used comparative costs. He has used differences. His differences I criticize.

Q. Well, do you criticize the comparative results of direct cost via those routes as unreliable?

A. I say I haven't criticized the comparative results. I criticize the difference in the two results, and it is the money difference that he has made use of. He hasn't made any use of any percentage relation being preserved.

Q. Now, you mentioned a few minutes ago a hill—what hill did you have in mind? The ascent between Eugene and Crescent Lake?

A. Well, that is one of the big hills on the Southern Pacific, and the other one is between Roseville and Sparks.

Q. Yes; now, when you get to Crescent Lake, as between the cross-State line route and the Alturas route, is there any substantial difference, so far as ascents and grades are concerned, whether you go the Alturas route or the cross-State line route, starting from Crescent Lake?

A. I haven't made any study of the costs on the train line, so——

Q. You can't say?

A. I can't say. (3885.)

Exam. ROGERS. Mr. Day, have you made any analysis of total cost of moving this western Oregon traffic to see whether the present rates are compensatory or not?

A. Yes; I have made in times past studies in connection with those, and I haven't found any rates that are not compensatory.

Exam. ROGERS. To what extent are they compensatory? What returns do they yield as a whole?

A. You mean lumber shipments?

2146 Exam. ROGERS. Well, you can take lumber shipments.

A. Well, if it is local to our lines we earn more on it than we do if we ship it to eastern points, and you can hardly say in a blanket way how much of it is compensatory, but I thought you were directing it to if there were any haul on which we didn't make money. I haven't found any specific haul on which we lost money, as Mr. Newell has found by his method.

Exam. ROGERS. Well, did you find that you were really getting a return to-day of five and three-quarters per cent on this western Oregon traffic, taking the traffic as a whole?

A. Well, I haven't investigated that, and, of course, you can't—that is a matter of assigning, then, if you want to say that lumber wants to contribute a certain proportion of the overhead—I am speaking of just the direct out-of-pocket cost, and some of the shipments don't contribute very much (3886) above the out-of-pocket cost.

Exam. ROGERS. Did you make any such calculation as that, Mr. Newell?

Mr. NEWELL. I didn't hear the first question you asked. I am not quite clear what you are getting at.

Exam. ROGERS. Whether he has made any calculations on this purely cost basis that you have used in Exhibit 16 to determine whether the revenues now derived from this western Oregon traffic yield a standard return?

Mr. NEWELL. I didn't make any of that for that express purpose, but my study of detailed operations would convince me that they did not.

Exam. ROGERS. Now, who are you talking about? The Southern Pacific?

Mr. NEWELL. The Southern Pacific, on that round-about haul. I am talking now only of traffic going through Ogden. I have made no study whatever of what they might earn out of traffic into California, which is very light.

2147 Exam. ROGERS. It is just running around in my mind as to whether in making these computations reflected by Exhibit 16 and what we are talking about here we don't start with the presumption that everything is all right as it is now, and the result that you in your exhibit, Mr. Newell, arrive at is that the Southern Pacific would make out as well under this proposed arrangement as they do now—— (3887.)

Mr. NEWELL. Yes.

Exam. ROGERS. But wouldn't it also be of some importance in putting that through to know whether they are making all right now or not?

Mr. NEWELL. Well, if you are speaking of 5¾ per cent return, it would be difficult, and would certainly be a very long tedious study to work out their total returns from all their traffic and separate their capital investment and apply it properly to a particular part of the traffic, and it would be difficult to make a convincing return. I was dealing only with those transcontinental rates which are governed by the conditions across the continent on all the carriers, north and south, and which could not be varied in order to suit the circumstances of any one carrier. I took those rates as governed entirely by other conditions, mostly of carriers having shorter routes—altogether of carriers having shorter routes than the combined Southern and Union. Now, as to the question of adequate earnings, I wouldn't expect on that long-haul traffic it would be possible to earn the same rate of return as on the short-haul traffic, which is large on the Southern Pacific between Oregon and California.

Exam. ROGERS. I didn't know what there was to it. It is too big a problem to make up your mind hurriedly about, but it would seem to me that we attempt to leave the Southern Pacific in status quo, you might say. (3888.)

2148 Mr. NEWELL. That is the intention.

Exam. ROGERS. But I was wondering whether status quo was all right or not.

Mr. NEWELL. By status quo I mean what it would be if they had the Alturas Line. My intent was to leave them there, but——

Exam. ROGERS. All right.

Mr. DEY. Have you anything further to say on that?

A. Well, I think that the answer to Mr. Examiner's question is in the auditor's exhibit. If all of our returns and all of our expenses leaves us 5¾, that is the answer.

Comr. McMANAMY. That is the answer as to all traffic?

A. Well, I can't say that every unit of traffic must contribute at the same rate. Some will bear only the out-of-pocket cost, and some of it is quite profitable.

Comr. McMANAMY. Have you developed a satisfactory method for determining out-of-pocket costs?

A. Well, I just do the best I can. (3889.)

Exam. ROGERS. Well, that is what we are trying to do here, isn't it, in Exhibit 16 and in your exhibit, in determining the actual out-of-pocket costs?

A. That is what we are talking to.

Mr. McCULLOCH. May I ask just one question, please, Mr. Dey?

Mr. DEY. Yes; certainly.

Mr. McCULLOCH. Have you reached any conclusion about the propriety of the unit cost for resistance that Mr. Newell has used in his exhibit 16, whether that is too high or too low?

A. Well, that was too high.

Q. You feel that is too high?

2149 A. That is, the unit cost, I feel, is too high.

Q. And have you reached any conclusion as to his gross ton mile unit, cost unit, whether that is too high or not?

A. Just by inference, with his method of setting out his direct expenses, he uses percentages that are too high, then when you divide by the number of units I would expect that all of the units would be affected downward.

Q. Now, you figured that all of his cost units were to high?

A. All of those that I examined were too high.

Q. Did you mean all of them?

A. No; I testified a moment ago that I thought I had covered about 75 per cent. (3890.)

Q. Well, I wasn't talking about the accounts. I was talking about his cost units.

A. Well, he gets the units after he gets the costs in the direct, by mere division. I haven't changed his units any.

Q. Well, his units were train mile, car mile, gross ton mile and resistance. Now, you——

A. Yes; he developed the total number of units on the Short Line Railroad, Oregon Short Line——

Q. Yes.

A. And then after he had developed his direct costs he merely divided, so that if the direct costs were changed and the units remained the same, then his base costs there would be correspondingly changed.

Q. You mean that all of his cost units would be too high?

A. Should be revised downward.

Q. Ought to be revised downward, because you think they are too high?

A. That is the answer.

2150 Q. Well, now, have you reached any conclusion as to the propriety of their relationship to each other? That is, even if they are all too high, is their relationship to each other wrong? Take on page 67 there, you see for that haul from Eugene to Crescent Lake, that loaded haul, he has attributed $1.09 to the train-mile cost unit, $2.49 to the car-mile, $1.73 to the gross ton-mile, and $20.61 to the resistance cost (3891) unit. Now, in your judgment, is there any impropriety in the relationship of those cost units to each other, assuming that the total cost is too high, as you claim?

A. Well, I haven't investigated that thoroughly.

Q. All right.

A. But I think that Mr. Newell has pursued a good method in breaking up his units into these different factors, and I haven't made any criticism of the percentages that he has made in dividing the costs between the different elements.

Exam. ROGERS. Mr. Day, I just wanted to ask you one question. You talk about the one-third of the maintenance of way and structures expense as varying with traffic, or with use. Do you think that is about the proper figure when taking over the large number of carriers, or is that all one carrier?

A. I think when you apply that schedule to maintain line operations it will result generally in a figure that is higher than one-third.

Exam. ROGERS. About how much?

A. Well, on our busy lines it runs up to close to 50 per cent. It is different, you see, it is different on different lines, depending upon the movement of traffic, and it also depends on the grades and curves in the line. (3892.)

Exam. ROGERS. Would you say it would run between 33 and 50 per cent?

2151 A. That would be the range, I should say.

Exam. ROGERS. I assume if you were testifying in a rate case you would say about that same thing?

A. I try to be honest.

Redirect examination:

Q. (By Mr. DEY.) In order that there may be no misunderstanding, Mr. Day, with respect to your Exhibit 108, which is labeled, "Correction of Mr. Newell's Exhibit 16, as shown in Table so-and-so," is that intended to be a complete and thorough correction by which you wish to be bound or not?

A. No; not at all. It is rather a hop, skip, and a jump at it, you might say. That is, I have studied about 75 per cent of the items, and I see they are too high, and then I draw the conclusions that—(3893.)

Q. Now from the study that you did make and in arriving at your 33⅓ per cent reduction, was that percentage conservative or

not with respect to what was revealed to you by such examination as you made?

A. Well, I have a deep feeling that I have been particularly fair in this. If I had to produce a figure for my superiors to show what I would be willing to attempt as the out-of-door cost, I would be afraid to go as high as this figure that I have now without a detail study.

Q. That is, as high as the 66⅔ that you have allowed them?

A. That is the figure that I refer to.

Q. Yes. In other words——

A. That is, if the company were faced with the problem of deciding to lose the traffic or hold it to itself, I would be afraid to use as high a figure as that as the cost and say it would not be profitable when it got to that figure.

2152 Q. Yes. Now you gave some testimony this morning with respect to a 41 per cent division. Now that, as I understand your testimony on cross-examination, was carrying one step further the exhibit that you introduced at the request of the examiner?

A. That is just carrying on the assumptions that he wished carried out, that the empty-haul feature that Mr. Newell said was cut out and then these other corrections made to it.

Q. Then you carried it on to show that instead of a division of 27 per cent, assuming that your Exhibit 108 is approximately (3894) correct, you would have to have 41 per cent to make the Southern Pacific whole?

A. As to that particular haul.

That presumes that we handle all the empties up to Crescent Lake for nothing; that is, this exhibit.

Exam. ROGERS. Let me see if I get that straight. This 47 per cent division—is that the figure?

Mr. DEY. 41 per cent.

The WITNESS. 41 per cent.

Exam. ROGERS. This 41 per cent division would not include any compensation for bringing the empties up from California to Oregon?

The WITNESS. That is it; yes.

Mr. DEY. Well now, I don't understand that. You are bringing them up now, aren't you?

A. Yes. We are getting the long haul for bringing them up.

Q. But if 41 per cent would make you whole on your present method, why wouldn't that include the cost of hauling these (3895) empties up?

Exam. ROGERS. That is the way it seems to me.

Mr. DEY. Yes.

2153 The WITNESS. No. The calculation covers the expense without any backhaul, and it results in a net without and backhaul, and the cars are up there now, of course, but as to this movement across there they are not figured in the calculation.

Q. Yes; but if the Southern Pacific is given the same net that it now gets when it performs now this northbound empty car haul from California, why can't it continue to make that car haul just as it is doing now and with this 41 per cent of the division be as whole as it is now and perform the same free empty car service that it is performing?

A. Well, that is true, but now we are hauling cars up there and we would have to continue to haul them up there.

Q. Yes.

A. But we are not being paid to haul them up there, in addition to delivering them to the Union Pacific on the short haul. That is, if the Union Pacific hauls their cars from somewhere else we would not haul them up to Crescent Lake.

Q. Well, if the Union Pacific hauls them from Ogden or Omaha and relieves the Southern Pacific Company from hauling them up into Oregon, and then you still get a 41 per cent division, you are being made whole and being relieved from performing an empty car service north, aren't you? (3896.)

A. Well, we are substituting that empty haul for another empty haul; that is all.

Exam. ROGERS. Well, as you are calculating now the 41 per cent takes care of the empty haul?

A. I haven't got that into the picture. We can't tell by changing this routing, the methods of routing, we can't tell what effect it would have on the Southern Pacific, whether it would increase our empty car movement or decrease it.

Mr. DEY. Oh, I see.

2154 Comr. MCMANAMY. Is that properly a part of the picture? Your rate covers the movement of the traffic into southern California and unloading it and disposing of the empty?

A. Yes; I think it is part of the picture. I think to complete Mr. Newell's study he would have to invent a system of getting his empties out here some other way, and what effect it would have on our own, that would be an impossible task to determine.

Mr. DEY. I see. You figure if you don't haul them north you have got to haul them down to El Paso or some other place, and therefore it washes; you have to do the same amount of empty car haul anyway?

A. I don't know whether it washes, but there would be a change and it would take a long time to develop that.

Mr. DEY. I see; as long as we get it clear. (3897.)

2155 G. J. SIELAFF was thereupon produced as a witness on behalf of defendants, and, having been duly sworn, testified as follows:

Direct examination:

My name is G. J. Sielaff. I am a geologist for the Southern Pacific Company. I have been in my present capacity for the last 3½ years. Previous to that I have been in the mining business for

the last 28 years. I graduated from the School of Mines, the Nevada School of Mines, Nevada State University, in 1900. I have been practicing my profession continuously since (3898) then for 28 years, excepting for one brief period of one year. The nature of my experience has been operating mines, making examinations of different prospects throughout the country in different States. I have been with the Southern Pacific Company altogether 9½ years, but I have been with them a little over 3 years, in my present capacity. I do nothing but geological work.

I know where Alkali Lake is over in central Oregon. I have been there three times, in October, 1927, the first of July, 1928, and again the 15th of August, 1928. I went there the first time in 1927 to attempt to determine the relative merits or the value of the soda deposits at Alkali Lake. I took an assistant with me. (3899.) When we got there we made a general reconnaissance of the entire lake, went around it; then we noted these pothole areas, marked them and mapped them out, laid off certain areas in them where the potholes were apparently the thickest or occurred most frequently, measured that area out, measured each of the potholes in that area, determined the area of them; and we also drilled holes in 11 or 12 of these potholes to determine the extent or depth of the deposit of sodium occurring in these potholes. We also drilled the area between the potholes and the areas outside of this pothole area.
2156 At that time we drilled 10 feet to 10 feet 4 inches. On the last trip I went through practically the same thing again, except that I drilled several holes to a depth of 20 feet 8 inches. On the middle trip, July of this year, I drilled holes in the pothole area, right in the pot (3900) holes themselves, to determine the thickness of the salts in those areas. I had instructions from the headquarters of the freight department to go there to determine, if possible, what was located, what the extent of the soda deposits at Alkali Lake was.

Q. (By Mr. Dey.) You went over there at a request which originated from me, didn't you?

A. I believe so.

I did not know at the first when I made this analysis what it was going to be used for. I came to know this before I had made my report, the exact date I do not remember.

I found in these pothole areas a crystaline compact salt; that is not a common salt, as the term is definitely applied (3901), but composed of various salts. With respect to the purity of the products that I found there: They contain, as a whole, a higher percentage of sodium carbonates than most deposits which I have visited or have knowledge of. Soda ash is a calcined sodium carbonate; that is, when it is relieved of the water.

Q. Well, do you find any soda ash over there?

A. Not as such; no.

Soda ash is composed entirely of sodium carbonate, with minor amounts of impurities, but the salts as contained there, according

to my analysis of a bulk average, show approximately (3902) 81.61 per cent of sodium carbonate; that is dried, recalculating, by leaving out the moisture or the insoluble content, such as deleterious substances which might have been blown in on the lake, that average analysis would show 81.61 per cent of sodium carbonate, about 7.6 per cent of bicarbonate; it would show 2.74 sodium chloride or
2157 common salt; it would show sodium sulphate 1.99; potassium sulphate 1.78; calcium carbonate, which is carbon lime or limestone, 1.68; magnesium carbonate 2.33; borax 18 per cent, and sodium phosphate .03 per cent.

I found no soda ash as such over there. As to how many thousands of tons: There is no such soda ash as such. I did not find anything over there in very large quantities, or in any quantity, that could be heated up and dried out and would then become soda ash.

Q. A pure marketable product?

A. No, sir; not as soda ash.

It is an impure soda or crude salt. To make soda ash out of it you would have to go through a complicated chemical process. (3903.) That would cost on the basis of costs around the Owens Lake country, from $15.00 to $17.00 per ton. The salt as gathered from Alkali Lake can be marketed as crude soda. There is limited use for crude soda in the market. As to whether it compares at all with the use of soda ash: Only in some establishments where the requirements for purity are not as fixed as in most of the larger establishments. The proportion of that used is very small as compared with the amount of soda ash that is used.

Q. Well now, Mr. Emerson, H. L. Emerson testified in this case; I don't remember the exact testimony, of course, but the effect of it was that there were thousands of tons of material over there that, when dehydrated, was marketable soda ash as pure or purer than anything else that is found anywhere in the country. What have you got to say about that?

A. There is not. I will qualify that in this way: If considered from natural deposits, it has as high or higher sodium content than any that I know of, but that is all. (3904.)

2158 It has not the purity that relieves it from further processing, not as a soda ash. That would cost from $15 to $17 per ton to handle by the modern methods that are applied to that sort of product. It would be a hard question to answer what would have to be done to that material to make it marketable as soda ash, owing to the fact when you consider the immense amount of money and equipment that has been spent at the plants around Owens Lake and Searles Lake country in working out a definite process for the beneficiation of those deposits. They spent millions of dollars in testing, and the like, until they have evolved a process that was suitable for their deposit. But in general the process would be to dissolve these salts in a thick enough brine and probably filter to relieve of the silicas and the insoluble content, and then passing

carbon dioxide through the solutions and carbonating the sodas as sodium bicarbonate, which is not very soluble in water or solution in water. This sodium bicarbonate is then calcined to make soda ash. Wherever they have found a (3905) natural deposit, there are general principles of refinement that apply, but they must refine that process down to a point where it will treat this particular deposit. That is, there is a variation in these deposits that requires special application in each case, and it takes money to find out what that special application is.

As to what would be the factors in the cost of production to produce soda ash from the Alkali Lake deposits: First, the salts would have to be gathered either as the solid from these potholes, or it would have to be blasted or upon some means of taking the solids out from the potholes, or by making a large sump in some way and putting these salts in solution, drawing them to a natural reservoir, and that would be an excavation—not natural but artificial.

2159 An artificial reservoir. Then the brines would have to be allowed to remain there until the dust or insoluble settled out of it; either that or put through a filter press which would remove these insolubles. After that they would have to be evaporated (3906) according to the present procedure; they would have to be evaporated and the salts removed by evaporation. That is, if just the crude product were desired. If not, the brines could be subjected to some chemical process in order to remove the desired product. And then you have a marketable product, located at Alkali Lake, that has to be transported to market somewhere. That price of $15.00 or $17.00 a ton that I gave is the cost price at plant.

I have investigated the costs of other producing points where they produce from the natural mineral in so far as I have been able to, but as there are only a few, very few of those plants of that nature, all of which are located in California, there is a certain reserve amongst the superintendents, which do not desire to let out trade secrets, which would be of that nature, by exposing or giving away their actual costs.

Soda ash is produced in another way than by mining and refining; chemically. (3907.) The principal process for the production of sodium carbonates to-day is known as the Solvay process, or some modifications of that Solvay process. By this process a saturated brine solution, treated with ammonia, then subjected to a treatment of carbon dioxide, produces sodium bicarbonate, which, in turn, has to be calcined to make sodium carbonate or soda ash. They apply common salt, sodium chloride, to this Solvay process to make soda ash.

As to how much of the soda ash produced in the United States is produced by the chemical process, and how much of it comes out of these so-called deposits which are scattered over the country:

2160 In 1921 natural soda produced in the United States amounted to 1.39 per cent of the total soda ash produced; in 1923 there

was 0.872 of one per cent. It would be less than one per cent. In 1925 it was 1.355 per cent. That is the latest figures (3908) which are available at the present time. There is 98 per cent or better of the soda ash used in the United States that is made from common salt by chemical process. So far it has been much cheaper to produce it that way than by trying to refine such deposits as we found in Alkali Lake. The costs that are given are approximately $8.50 per ton by the Solvay process. As to the comparative selling prices of this commodity coming from these two different sources, one by chemical process and one by refinement of mineral deposits: As a general rule, the soda ash made from the natural deposits is not as pure as the soda ash made by the Solvay process, and its ruling price runs from $5.00 to $6.00 less per ton. It depends on the purity.

I have read Mr. Emerson's and Mr. Young's testimony in this case. (3909.) As to the conclusion I draw from their testimony, I would say they are overly optimistic.

Q. Just describe to the commissioner and the examiner what you found as you bored down in these drill holes, what you got out of there. Just take any typical hole.

A. We found that the actual thickness of the salts, what might be described as the west area, which roughly outlines the potholes in the western portion of the deposit——

Q. Take the best area you found.

A. That average thickness of the salts in those potholes was 3.69 feet. In the other area, or the east area, the average thickness was approximately 4 feet 4 inches, although a hole which I drilled later, along about the 15th of August, showed only 3.6 feet. That is about the average. That is the crust filling the potholes.

2161 Q. What do you find then below that?

A. Mud, containing salt crystals.

Q. What?

A. Mud and slime containing salt crystals. This goes down to approximately 9 or 10 feet. Sometimes it varies. Below this is clay. (3910.)

Q. Now in your 25 years of experience in geological and mining work, in your opinion, from the three separate examinations that you personally made over there, do you believe that that property affords an opportunity for commercial development——

A. I do not.

Q. Wait a minute—that will have any fair chance of competing with the soda ash produced in other localities and by other processes, or by all known processes?

A. I think it would be unable to compete.

Q. How much soda ash is used in the United States?

A. Approximately 2,900,000 tons.

Q. Annually?

A. Wait; I may be off on that. In just a minute I will give you the figures. About 1,900,000 tons; for 1925 the total ash produced was 2,471,868 tons.

(Cross-examination of Mr. Sielaff to proceed after Witness George M. Duncan has been examined.) (3911.)

GEORGE M. DUNCAN was thereupon produced as a witness, on behalf of defendants, and, having been duly sworn, testified as follows:

Direct examination:

I am in the manufacturing and wholesaling lumber business.
2162 We operate a mill at Dryad, Washington, in Lewis County, where we produce about 30,000,000 feet of lumber annually. We market the product of that mill, and in addition to that we buy and sell lumber, and sell and buy lumber. The lumber that we do not produce we buy in Oregon and in Washington, and in rare instances, in British Columbia. We buy, I would think, from 600 to 1,000 cars a year in western Oregon—depending upon conditions. This lumber is purchased generally from the mills, large and small, in the Willamette Valley and other parts of western Oregon. (3912.) We handle the routing of this lumber.

Q. Is it a fact that most of the small mills sell to wholesalers, such as yourself?

A. Yes. The marketing area of lumber, particularly fir lumber, is very large. The small mill, the mill with a small production, in fact the mill with a medium size production, can't afford a selling organization to cover all of that territory; it would make his unit selling costs too great. Consequently, those mills invariably market their product through wholesalers and commission men, and so forth and so on. In other words, they don't maintain a complete sales organization of their own.

I know the Bohemia Lumber Company. We have bought lumber from them.

Q. Now the lumber that you purchase in western Oregon is routed how to eastern destinations, back in the Middle West, say, beyond Granger, Wyoming?

A. We route the most of that lumber through Portland and the (3913) Union Pacific.

Q. Why do you do that?

A. Well, Mr. Dey, it is the policy of my concern, and a policy of my own, to reciprocate the business that I get from other railroads. I sell the Union Pacific lumber; I try to reciprocate by routing tonnage via their railroad. That is why.

2163 Q. Do you sell lumber to the Southern Pacific Company?

A. Very rarely.

Q. Do you route any of these shipments through Odgen?

A. Occasionally, yes; but rarely.

Q. In routing your shipments, do you take into consideration the length of haul that may be open to you by one gateway as against another?

A. No; we don't. We find that the difference in time of deliveries is not of moment. Lumber moving by the way of the southern route through Ogden, lumber moving by the way of Portland through the Union Pacific, going to eastern points, the difference in delivery has never been of any consequence to us or to any of our customers.

We route the lumber that is manufactured by us over in Washington on the same principle exactly. Our mill is located at Dryad, Washington. We have two lines serving that plant. Each of those lines patronize us with their lumber requirements. We divide our tonnage as between those two initial (3914) lines proportionately to the business that we secure from them, and then we route beyond those initial lines to favor other lines to whom we sell lumber, such as the Chicago & North Western, the Minneapolis & St. Louis, the Soo Line, and so forth and so on.

Q. What has been the experience of the lumbermen in western Oregon and the lumbermen in western Washington during the time that you have been here, with respect to prosperity or a lack of it in the industry?

A. Well, Mr. Dey, it is my observation that the lumbermen in this area in the 16 years that I have been here have had no prosperity, except a short period after the war, when there was an exceptionally heavy demand of lumber created through war conditions. That was, as well as I remember, in about 1920 and
2164 1923. And during the 16 years that I have been here, I don't believe that there has been a reasonably prosperous era for the manufacturers of lumber to exceed 6 months; at any rate, not to exceed 12 months. (3915.)

Q. At a time?

A. At a time.

Q. How do you account for that?

A. Well, we have too much lumber; that is why—too much lumber being produced.

Q. The testimony in this case shows that the timber belt of Washington has been depleted proportionately more rapidly than the timber belt of Oregon. In your opinion, has that been a good thing or a bad thing for the State of Washington, and why?

A. I think it has been particularly unfortunate for the State of Washington, for this reason: I think that, in round figures, approximately 66⅔ per cent of the original stand of timber in Washington has been harvested. No profit has accrued to the State of Washington out of that harvesting. The natural resource has been cut away. There has been profit that came out of it to establish other industries to give employment to labor, to take the place of timber in paying taxes, and so forth; and, as far as I can see, Washington has got no benefit out of it of consequence. But the States that have no timber, like Kansas, Nebraska, Missouri, and that country over there, have got a benefit out of it, in that they have been afforded cheap lumber to build houses for (3916) their citizens.

Q. What is the situation with respect to the logged-off areas in Washington and in Oregon—what takes the place when the timber crop is gone, or up to date what has taken place?

A. Well, a little farming, and a very little. I have, and anyone who has, will notice in driving, say, from Seattle to Everett, and from Everett to the British Columbia line, or driving from
2165 Seattle to Grays Harbor, around Montesano, or driving from here to Chehalis, and from Chehalis out to Raymond, you will see that vast areas of cut-over timberland that is doing nothing, absolutely nothing, producing nothing. It is a burden to the people who own it. Their taxes are actually more than the land is worth.

It costs quite a bit of money to clear that land from stumps and stuff of that sort and put it into farming; and if it was into farming we have no one here to consume the products. Consequently, that area that has been denuded of this forest is just lying idle, and in my judgment will lie idle for many years yet.

Exam. ROGERS. Are your taxes reduced when the timber is cut off?

A. Some, yes; because the land has a less value than the land with the timber on it. (3917.)

I think, Mr. Dey, the general consensus of opinion is that the quality of the timber in Washington was better than the quality of the timber in Oregon. Yes; I would think that that fact had something to do with the more rapid cutting of the Washington timber, because at an equal price your opportunities are better with a better raw product than they are with an inferior raw product.

I was in the lumber business in Louisiana and Texas before I came to Oregon.

Q. Then when you came here and looked over the Oregon and Washington timber belt, you would naturally, at the same price, locate where the better grade of timber was?

A. Naturally.

Q. There has been some suggestion in the record in this case, I believe, that it is necessary, or whether it is in the record or not, what have you to say with respect to any claim that there
2166 are vast quantities of timber now ripe or overripe that requires cutting in order to salvage it? (3918.) And what are your ideas with respect to such timber?

A. Well, my own judgment is that that is largely theory; that after these forests mature there has always been more or less ripe timber. I believe the foresters hold that a forest reproduces itself about as fast as it becomes overripe and decays and goes out.

But, regardless of that, the fact that there might be ripe timber I don't think is any justification for taking that timber and harvesting it at a loss, and naturally you are not going to harvest only the ripe timber because the ripe trees grow right around with the other trees, and this timber being large, the country being rough, your logging operations necessarily must take everything that there is there. You simply can not do selective cutting in these forests.

Consequently, if you start in on the theory of harvesting only the ripe timber, you must necessarily harvest the other timber as well, and your other timber will be far in excess of the ripe timber; then you are cutting away good timber at a loss to salvage a little ripe timber, also at a loss. (3919.)

Cross-examination:

Q. (By Mr. McCULLOCH.) Mr. Duncan, on what lines of railroad is your mill at Dryad located?

A. On the Chicago, Milwaukee & St. Paul and the Northern Pacific.

We buy approximately the same amount of lumber in the State of Washington as we do in Oregon. We buy some of these 600 to 1,000 cars a year in Oregon, from mills at Portland.

Q. Is the lumber that you buy, or the bulk of the lumber that you buy, as a wholesaler, in the State of Washington bought from mills that are located on the lines of more than one railroad?

2167 A. No, no; I don't think so. There are quite a few mills up there located on one line.

Q. Do you find in your business as a wholesaler that it is of any advantage to have the opportunity of shipping lumber that you buy to eastern destinations over more than one route?

A. Not now; no.

Q. Why is that?

A. Well, the principal advantage that in the past the having of more than one line was during times of car shortage. We have had nothing like that for the last several years, and (3920) inasmuch as the mills are supplied with ample equipment, there is no advantage. The rare circumstances might occur where we could buy a car of lumber from a mill located on a single line that we couldn't fill a certain order with account of the tariffs of that line not permitting us to get into destination on the proper rate, but in each instance we can always buy it from some other mill located somewhere else that we can get into destination on the competitive basis.

Q. Well, in that respect your situation as a wholesaler would be a bit more advantageous than that of a manufacturer who was selling his own product and had only one point from which he could ship, wouldn't it?

A. From that standpoint, yes.

Mr. DEY. That is, assuming there was a different rate structure, though, that applied to his mill than applied generally on the coast?

Mr. McCULLOCH. No; not assuming that there was a different rate, but the same rate—that is, that his mill took the coast rate to eastern destinations, as well as other mills.

A. Well, now, I don't get that just exactly, Mr. McCulloch.

2168 The advantage would be if—if from this mill, we will say, the rate was 72 cents, and from this other mill the rate was 73

cents, naturally the advantage would be with the 72-cent rate mill. (3921.)

Q. No; but I was thinking—you are talking about the rate to Chicago. The rate from most of the points where fir mills are located in Oregon and Washington is the same to Chicago?

A. Yes.

Q. That is 72 cents?

A. Yes.

Q. But a wholesaler—my point is this, that a wholesaler in buying lumber and then reselling it and shipping it east, if for any reason apart from rates—I mean competitive rail service, or inability to use a particular route to make delivery—he finds it inadvisable to buy from a particular mill, there are a great many other mills from whom he can buy, isn't that true?

A. Yes; the wholesaler has this advantage, that he has every mill as a shipper for him, while the individual mill has only itself.

Q. Yes. Now, in these times of car shortage that you mentioned a number of years ago, did this ordinarily occur in times when demand was strong and prices were good?

A. That condition made prices good—the car shortage.

Q. You mean the car shortage was the cause of increased demand and better prices?

A. Not exactly increased demand, but it made better prices (3922), because lumber was more difficult to get on the part of the distributor, and those who could get the cars and could furnish the lumber would naturally get a better price than if lumber was easy to get and he could get them anywhere.

Q. And were the beneficiaries in those better prices in those times those that had competitive rail service, generally speaking?

2169 A. Well, it was the mills that could secure the cars, and back in those days, the mill that had two lines could probably secure more cars than the mill who only had one car. I don't know that that condition would exist now.

Q. Does your company as a wholesaler, or your mill at Dryad, receive a good many orders calling for immediate delivery?

A. I will say for the last 12 months, or probably longer, practically every order is for immediate delivery.

Q. What time would that contemplate, then, an order of that sort, in getting a car of lumber from your mill at Dryad, to Chicago, for example?

A. Well, immediate delivery in lumber parlance has nothing to do with the time of delivery at destination.

Q. It doesn't?

A. It is time of shipment, and I believe what is known as west coast terms say that prompt shipment is within 30 days, and immediate shipment, I think, is within 2 or 3 weeks. (3923.)

Q. There is one other witness who testified yesterday. I believe, a lumberman, that this phrase "immediate delivery" in the trade meant shipment from the mill within 10 days of the receipt of the order.

A. That may be true.

Q. Do you know about how long the time in transit is from western Oregon and western Washington of a car of lumber to Chicago, in your experience?

A. Well, I have never had occasion to really check into it, Mr. McCulloch. I only know in a general way. I think shipments are going through to Chicago now in somewhere around 2 weeks, possibly a little longer.

Q. In recent years has there been any change in the way of accelerated movem nt of lumber to eastern markets from
2170 these points in western Oregon where the mills are located, and western Washington? Has the movement been appreciably speeded up?

A. Without doubt, I think we are all cognizant of the fact that the railroads have very materially increased their efficiency in the last few years in the matter of getting stuff over their lines, taking them through.

Q. Has that resulted in any change, in your observation, in the practices of the retail lumber yards of the East and lumber purchasers generally in buying their requirements of lumber on the west coast? (3924.)

A. Yes; it has resulted in a change that, in my judgment, has been rather to the disadvantage of the producers of lumber, in that before the railroads improved their efficiency an ordinary shipment, say, that goes through to Chicago, say, in two weeks, or goes through to Minnesota Transfer in, say, two weeks, that shipment would be enroute 3 and 4 weeks, maybe longer, sometimes 30 days. Under those conditions the distributor of lumber necessarily had to anticipate his requirements for his local trade. That forced him to carry a much larger stock than he carried under present conditions. The speeding up of this service on the part of the railroads enables now the distributor to carry practically no stock, get his shipments promptly, get his deliveries promptly, and consequently that burden is now put upon the producer. We must carry the stock that formerly was carried by the distributor.

Comr. McManamy. Well, is it your thought that the western producer of lumber would be better off to-day if he had an occasional car shortage and that time of delivery was substantially lengthened?

A. As a comparison with the old days; yes.

Comr. McManamy. Why the comparison with the old days?

2171 A. As a comparison with the conditions back when we had these (3925) car shortages, probably yes, but you must bear in mind that there are other factors in connection with that. In the days when we had this longer delivery in time, took much more time than it does now to get the shipments to destination, there was a practice on the part of a good many wholesalers to buy lumber which wasn't sold, put it in transit, use the railroad cars for warehouses, which further accentuated the car shortage, and then they would sell that lumber while it was in transit. They had ample time to dispose of it. The man who knew the requirements of a certain area would sense a probable advance and he would go out and buy, I will say for illustration, a hundred cars of lumber of different assortments that he thought would fit the trade conditions where he sold his

lumber. That lumber would be in transit, we will say, going to Minnesota Transfer, at least 30 days. In that 30-day period he would sell that lumber. Now he can't do that, because he hasn't time to sell it while it is in transit. Attempting to do that now would result in a great many possible cars going on to demurrage, and at the increased demurrage rates his profit would be more than wiped out, so that particular practice in lumber has been cured. With it has come the other matter that I spoke about, the distributors carrying less, limited stock, and putting that burden on the manufacturer; so of the two, the transit of lumber was by far the greater evil.

Q. (By Mr. McCULLOCH.) And you say that this has substantially (3926) disappeared?

A. That has substantially disappeared in rail shipment; yes.

Q. Now, have those conditions that you have just described led the producers of lumber in the East to insist on more and more prompt delivery of their orders to them?

A. Yes. I don't know whether that did it or not, but the 2172 distributor of lumber, the retail merchant of lumber, carrying a much less stock than he did in the past, having less lumber to supply his trade, necessarily must have very prompt service to keep that condition as regards his own stock, but so long as we continue to overproduce lumber on this coast, produce more than the market will take, so long as we don't keep our production fairly well balanced with consumption, that condition will still exist.

Q. Mr. Duncan, would you say that, in view of these present conditions, a saving in time in transit of 48 hours on a car of fir lumber to a point in Illinois or Iowa or territory around there would be considered unimportant or of no consequence by the eastern retailer or producer?

A. I don't think it would. I have been in the retail lumber business, several years ago. Forty-eight hours is not a long period of time in the matter of constructing a house or building a pig pen or building a chicken house, or something of that sort.

Q. Well, you think then, that the ability to get a particular (3927) car that was needed in a hurry, of items that a retail lumberman in the East had a demand for that he wanted to supply, do you think that a saving of 48 hours in the ability to get that by using a particular route would be considered by him to be of small consequence?

A. Well, there are rare instances, of course, when it would be of considerable moment to him, but as a general proposition—I am talking about the general business—of course—I don't think it would amount to much.

Q. Now, in the routing of cars of lumber your company ships as a manufacturer, or as a wholesaler, to the East, do you consider, in determining which particular route you will specify, the 2173 length of the route of the time in transit by the various

routes? Do you take that into account at all in determining the routing?

A. No. We may be rather peculiar in that respect, but the main thing that we take into consideration is being able to route that tonnage over the railroads whom we consider friendly to us and who we do business with. That is the sole factor with us.

Exam. ROGERS. Do you do that although you pay a higher rate by one route than you do another?

A. No; we will always do that on an equal rate.

Q. Would it be equally satisfactory to you as a manufacturer if your mill at Dryad were served by only one railroad, instead of two? (3928.)

A. No.

Q. The competitive rail service, then, is of real benefit to you as a lumber manufacturer?

A. In this respect—by having two lines at our mill we have two opportunities to sell lumber where we would otherwise have one. By having two lines we might in rare instances have a litle bit better service. In the past, in the old days that I am talking about, two lines were of great benefit as compared to one, but, while I am operating now a mill that has two lines, it is my observation that the mills who have one line get just as good service as I do out of two.

Q. Would you say that for the same reasons as you have given affecting your mill at Dryad the construction of the line of railroad proposed here from Crane over to Crescent Lake, affording a new through route to eastern markets, would be of substantial benefit to the lumbermen in western Oregon, the opportunity of having a through route, and to that extent competitive rail service, to the East?

A. From a lumber standpoint, Mr. McCulloch, I couldn't see that (3929) that would be of any benefit whatever. The road
2174 through there might be a benefit to this area over in eastern Oregon, it might be a benefit to some other industry, but, frankly, from a lumber standpoint I can't see it; I don't believe that it would. The fact that it would open up more lumber territory I believe would be a detriment.

G. J. SIELAFF was thereupon recalled to the witness stand, and testified further, as follows:

Cross-examination:

Q. (By Mr. ELLIS.) I understand you have been employed by the Southern Pacific Company for the past several years, Mr. Sielaff?

A. Yes, sir; about—over 9 years. My work has been varied. First, I was employed by the land department as a land examiner; afterward, subsequently, I was taken to Texas on construction work, putting up oil tanks and doing geological work in the oil field. I returned to California (3930), ran the oil shale plant out in Elko,

Nevada, when the oil shale experiments were being conducted—extracting oil from shale. Subsequently I returned to Texas again on similar work, engineering, to work in the oil fields. Three years and a half ago I was called to San Francisco to assume my present position.

In my present position I make such examinations as requested, to report on the character of rocks for ballast, the character of locations for dam sites, and work of that nature. I am a mining engineer. I do not profess to be a chemist or chemical engineer.

2175 Prior to being employed by the Southern Pacific Company I was engaged in the mining business. In that business I spent six and a half years in the Tropics, in Central America (3931) as superintendent and general manager of various properties. In the United States I made examinations in nearly all of the Western States. The mines I was connected with in Central America were gold and silver properties.

I was never employed by any company engaged in developing soda deposits.

Q. Prior to your investigation in this case, did you ever have anything to do with the investigation of a soda deposit?

A. I investigated other soda deposits, other saline deposits, since my employment by the Southern Pacific Company. I investigated the deposits at Double Springs in Nevada, Rhodes Marsh.

Q. Are those Double Springs located at Ragtown, Nevada?

A. No, no; that is out east of Schurz, 7 miles east of Schurz, Nevada.

Q. (By Mr. DEY.) Where is Rhodes Marsh?

A. Seven miles east of Schurz, Nevada.

Mr. DEY. Where is Rhodes Marsh that you mentioned?

A. Rhodes Marsh is situated south of Mina, or close to (3932) Sodaville, or what we might call Tonopah Junction; it is right at Tonopah Junction, in Nevada.

I have been at Owens Lake and at Searles Lake, also. I had a chemist make a chemical analysis of the Alkali Lake deposit. The first analyses were made by G. L. Baxter, the chief chemist of the Southern Pacific Company, and other analyses were made by Abbott A. Hanks. He is a chemist in San Francisco.

Q. (By Mr. ELLIS.) So the testimony you have given here as to the purity of the deposit of Alkali Lake is based entirely on the analysis made by these chemical engineers?

A. Yes; on samples taken by myself. Some of these samples

2176 were taken in the potholes, and some in the areas surrounding the potholes. I took a total of 18 samples. (3933.)

Q. And was this analysis which you read into the record a composite of all of those 18 samples?

A. The calculation of them, which would be a composite of all those sample. It wasn't a general mixture of the samples, but a summation and an average of the various samples.

Q. In taking the samples, did you try to get some that would be pure, near the center of the pothole, and some that were out on the margin, where there was a greater percentage of impurity, in order to get an average of the total lake bed?

A. I took samples right in the center of the pothole, where the salt was thick and dense. Other samples were taken between the potholes, to show the amount of salt that might be contained in the clays.

Q. Then your samples as taken and the analyses which resulted would assume that a commercial development of that lake would be made by taking not only the deposits from the potholes, but the mud and other impurities that you find between the various potholes; is that not true? (3934.)

A. In making a commercial development they would have to take as much as all of the salt process, whether within the potholes or in the saturated earth surrounding the potholes.

Q. (By Mr. ELLIS.) Would it not be practical to merely remove the deposits from the potholes and ignore the mud portion of the lake?

A. It wouldn't economically; no.

Q. If you take, or have an analysis made of the deposits in the pot-holes separate and apart from this composite which you say your figure of 81 per cent resulted from?

A. Yes, sir.

Q. And what percentage of sodium carbonate resulted from
2177 that analysis?

A. A sample of the salts which were extracted from one of the potholes and piled up on the side—I don't know by whom, but somebody who evidently had attempted to operate there—an analysis of that sample gives 2.08 per cent sodium chloride, 3.17 per cent sodium sulphate, .31 per cent potassium sulphate, 52.81 per cent sodium carbonate, 11.42 sodium bi-carbonate, and .11 borax. (3935.)

Q. Do you know where that sample came from? Do you know that it came from one of the potholes?

A. That I couldn't say that it had. It was piled up alongside of the pothole, as if it had been taken from the pothole; but I have other samples which were taken right out of the potholes. They produce a similar result, in a general way.

Mr. DEY. Have him give them.

Mr. ELLIS. I have before me a chemical analysis which indicates sodium carbonate to the extent of 96.21 per cent, which I understand to have been made from salts taken from one of the potholes on Alkali Lake, and I am wondering whether you think it would be possible to find salts containing that great a percentage of sodium carbonate in the pot holes on Alkali Lake?

A. In so far as all my investigations indicate, there is no such high grade soda there.

Q. Well, how does the purity of the soda compare with other deposits which you know about?

A. Higher. (3936.)

Q. How much higher? Can you express that in percentage, or in purity?

A. That varies considerably in all the different deposits. There probably hardly are two that are the same, or anywheres
2178 near the same, but I can give you the figures on some of the deposits which shows the general soda content in them.

It is higher than the purity of other deposits that are now being operated commercially. The Owens Lake deposit is the only other deposit I know of that is being operated commercially. I have visited that deposit.

Q. Do you know how much it is costing them to purify the product and make it into soda ash?

A. I have talked with the superintendents of all those plants, but they are all somewhat reticent as to giving the accurate figure. There are only two of them, they are competitors, but in one statement the superintendent of the National Soda Products Company made to me he indicated that the costs of the refined soda ash were $26.00 at that plant. How accurate that is, I cannot say.

Q. Do you know what the commercial value or market price of that soda ash is? (3937.)

A. Yes, sir. The latest quotations which I have made note of, where market prices are based on f. o. b. producers' works, are as follows:

$1.15 per hundred in bulk for light ash, $1.32 per one hundred pounds in bags, and $1.55 in barrels.

For the heavy or dense ash, it is $1.22½, $1.37½ in bags, and $1.55 in barrels.

Q. (By Mr. Ellis.) Where is this plant you have just been discussing located?

A. On Owens Lake, in California. In Inyo County. The National Soda Products Company is located at Keeler, on the east side of the lake. The Inyo Chemical Company is located at Bartlett, on the west side of the lake. Inyo County is in the southeastern
2179 part of California, east of Los Angeles. (3938.) It is reached by railroad.

These properties have been operated since 1914 or 1915.

Q. Could you state the percentage of purity of the product at Owens Lake, compared with the 81.06 per cent sodium carbonate that you found at Alkali Lake?

A. Do you want the manufactured product as turned out there, or——

Q. No; the raw product as you find it at the lake.

A. An analysis of brine at the lake—this first sample was taken before the lake had entirely dried up——

Mr. Dey. What lake are you talking about now?

A. Owens Lake, where the National Soda plants are located. Chlorine, 25.56 per cent; sulphate, radical, 9.96 per cent; carbonate, radical, 22.18 per cent; the borate, radical, 1.92 per cent; sodium, 38.07 per cent; potassium, 2.10 per cent. The total anhydrous salts in the original sample were 10.95 per cent; the insoluble silicate, .21 per cent.

Q. (By Mr. ELLIS.) Then the deposit—the sodium carbonate there—would be 38 per cent, as compared with 81.61 per cent at Alkali Lake? (3939.)

A. No; that is pure sodium stated in the other. The one I have given you at Alkali Lake is sodium carbonate. But you could easily figure out what that would be from percentages.

Mr. DEY. Can you figure it out?

A. It would be approximately 45 per cent—43 or 45 per cent.

Q. (By Mr. ELLIS.) Now, in arriving at your conclusion that a commercial plant was not feasible at Alkali Lake, did you take into consideration the fact that railroad transportation did not exist within convenient reach?

A. I did.

I found no soda ash at Alkali Lake, or at any of these other lakes.

2180 Q. Soda ash does not exist or is not found in its natural state, is it? It is the product of sodium carbonate produced after a chemical process?

A. Chemical process.

Mr. DEY. Right there, Mr. Ellis, didn't Mr. Emerson testify that all you had to do with this commodity as it was mined out was to dry it and you would then have soda ash?

Mr. ELLIS. That was my idea, simply remove the moisture content and you had soda ash at Alkali Lake. He didn't say that of these other deposits. The witness who preceded you, Mr. Duncan, in (3940) his testimony stated quite emphatically in connection with timber of the Pacific coast that the quality—the opportunity of developing a product was better with the higher grade product than it was with an inferior or low-grade product. That same principle would apply in connection with the soda deposit as it would with timber or any other raw product, wouldn't it?

A. We have to have both the quantity and the quality. In that way, the same.

Q. Well, there is no question about the quantity, is there, at Alkali Lake?

A. There is.

Q. Are you the Southern Pacific representative who was quoted in the Lake County Tribune of July 10th as stating that there is enough soda at Alkali Lake to ship out 25 carloads a day for 50 years or more?

A. I am not.

Q. You don't know anything about that statement?

A. I do not.

Mr. DEY. What is there to show that any Southern Pacific man ever made any such statement?

Mr. ELLIS. I merely referred to the article and the quotation and asked him if he was the one. (3941.) Do you dispute the claims of preceding witnesses as to the quantity of the product available?

2181 A. Yes, sir.

Q. How much do you think there is at the lake?

A. That question would have to be divided in what do I consider, or any one consider, the quantity of recoverable salts and the quantity of total salts in the lake. I would say, roughly, that the quantity of recoverable salts would be approximately 500,000 tons, of which 402,175 tons would be sodium carbonate.

Q. What would be the minimum capacity of the plant feasible for a project of this kind, if one were contemplated?

A. The plants around Owens Lake are working for a minimum of 100 tons product. The cost of the product, of course, would depend—the cost of operation, of course, would depend on location and various other factors. (3942.)

Q. Do you think that would be a minimum for a commercial production, a minimum capacity for a practical commercial production?

A. Yes, sir.

Q. Have you any information as to the extent of the deposit at Owens Lake?

A. Yes, sir. Estimates made of the quantity of salts contained in Owens Lake are, chlorine, 40,000,000; sodium, 60,000,000; potassium, 3,360,000; and the anhydrous boric acid, 3,070,00; or a total of 160,000,000 tons.

Q. Are all of those commodities being produced there now marketed and sold, or are they only marketing part of them?

A. Only part of them.

Q. What part are they marketing?

A. Principally the trona, which is the crude soda, and the manufactured soda, and caustic soda. There is one plant making caustic soda.

2182 Redirect examination:

Q. (By Mr. DEY.) Well, now, assuming that there were rail transportation available to this plant, or assuming that this cross-State line were built approximately 20 miles north of Alkali Lake, and that the industry that might be located on the lake for the manufacture of these products built its own railroad up to the cross-State line and thereby got (3943) transportation—with that element an accomplished fact would these deposits down there, in your opinion, permit of a profitable commercial development or manufacturing development, and, if not, why?

A. They would not.

Q. Why not?

A. Because they haven't even the quantity available, and the cost of production would be excessive in competition with the manufactured Solvay soda.

Q. Well, the thing I don't understand, Mr. Sielaff, is how can these Inyo County plants keep going, if a plant up here couldn't do it?

A. They have, as shown by this quantity of salts down there, very large tonnage; they have spent millions of dollars in developing and perfecting processes for the manufacture of that soda.

Q. Oh, I see—that the quantity up here wouldn't justify the expenditure of capital necessary to give a long operating return upon that capital, is that right?

A. To carry them through a period of experimentation and the development of a process for the extraction of that soda.

I couldn't say whether the same process used in Inyo County would be applicable here. That would depend on experiments entirely to determine. (3944.)

2183 I took samples of the purest stuff I could find from the center of the potholes, pure salt.

Q. And did those samples, the analysis of those samples, show that you could make a commercial soda ash or other commercial product by mechanical means applied to that product?

A. They all contain certain amounts of other salts.

Q. Was there any of it you found there, even the most pure, that didn't require a chemical process applied to it in order to make it marketable?

A. To make soda ash, do you mean?

Q. Yes; soda ash.

A. Every bit of it, yes.

These plants are located relatively close to Los Angeles. (3945.)

Comr. McMANAMY. Are they east of Indio station?

A. Yes; from Los Angeles to Bartlet is right on the shores of Inyo Lake (sic), where one company is, and the other is located on the east side, which is further. I should say offhand, about 240 miles.

J. H. MULCHAY was thereupon produced as a witness on behalf of defendants and, having been first duly sworn, testified as follows:

Direct examination:

I am assistant freight traffic manager of the Southern Pacific Company lines, in charge of the territory north of the California-Oregon State line, with headquarters at Portland. I have been connected with the Southern Pacific since 1909. With the exception
2184 of the period from 1915 to 1922 I was located in Portland with the Southern Pacific; the only intervening time when I was on detached duty during the war with the Western Freight Traffic Committee at Chicago, under the Federal administration.

Prior to that time, that is, prior to 1909, I was connected (3946) with the Oregon Railway & Navigation Company, going back to

just prior to the beginning of the Harriman merger, in 1901. In all that time my experience has been in freight traffic.

Q. Well, you are the responsible officer on the ground for the traffic of the Southern Pacific lines in Oregon?

A. Freight traffic, yes, sir.

Q. What territory does the Southern Pacific Company undertake to serve in the State of Oregon? I show you Exhibit 100, if it will be any help to you.

A. Well, the Southern Pacific is essentially a western Oregon institution. It aims to serve western Oregon and that part of the territory east of the Cascades immediately adjacent to its Cascade line, commonly known as the Klamath Basin, and territory south of the California-Oregon State line to the Central Pacific in California and Nevada, and also Lakeview. At least, those are the plans as I have always understood, of the Southern Pacific. They have never to my knowledge considered serving any other part of Oregon.

Q. And by "any other part" you include the so-called central Oregon territory that has been so much discussed in this case, involving the high desert and the adjoining territory?

A. Yes; I have reference to that territory east of Portland and east of the Cascades, except that mentioned.

Q. What do the brown lines on that map show there, Mr. Mulchay, while it is before you, then I won't have to bring it back (3947) again—and tell us in a general way what those small independent lines are, and what they amount to?

2185 A. Well, they represent short lines, independent short lines, that have been built by private parties in western Oregon mainly to serve timber owned by private parties largely; in some cases they are common carriers, but generally logging roads in the nature of plant facilities. (3948.)

I have prepared some exhibits for this case. The first is a statement consisting of 5 pages, showing comparison of distances via various routes from representative shipping points in western Oregon located on the Southern Pacific up to Portland, to Crescent Lake, to Granger, and to Ogden.

The title page of the exhibit generally explains its basis. It also shows the general average miles from the representative shipping points in each county of western Oregon, including Klamath County.

(The statement, consisting of 5 pages, was thereupon received in evidence, marked "Defendants' Exhibit No. 109, Witness Mulchay.")

I have another statement consisting of 3 pages, which is rather a composite showing of the distances appearing on Exhibit No. 109, to Granger, Wyoming. It shows the average distance from each county via the various routes through (3949) Ontario—through Crescent, through Roseville, through Alturas, through Portland, and the extent to which the route via Portland or via Crescent is shorter or longer than the routes via Roseville or Alturas, and vice versa.

(The statement, consisting of 3 pages, was thereupon received in evidence, marked "Defendants' Exhibit No. 110, Witness Mulchay.")

Exam. ROGERS. What did you take for each of these counties, some representative point, Mr. Mulchay?

A. Yes; the points as named on Exhibit 109. For instance, in Tillamook County you will see, on page 2, we took the stations of Wheeler, Garibaldi, Bay City, and Tillamook.

2186 Q. (By Mr. DEY.) Did you take the average of those four points?

A. I took the average of those four points. They are the principal shipping points in Tillamook County. We did not confine ourselves in the preparation of these existing tables to points shipping lumber alone, but, to the contrary, used lumber shipping points along with those at which were located canning plants, dried fruit packing plants, grain warehouses, etc. We attempted to arrive at the principal shipping points according to the general situation. (3950.)

I have prepared another exhibit, which is similar in every respect to Exhibit 110, except that it shows the average distances to Ogden, Utah, while Exhibit 110 shows the average distances to Granger, Wyoming, and the long and short mileage.

(The statement, consisting of 3 pages, was thereupon received in evidence, marked "Defendants' Exhibit No. 111, Witness Mulchay.")

I have prepared another exhibit consisting of three pages, one of which is a map attached to the last page, showing the Portland division of the Southern Pacific, with the different 16 counties, including Klamath County, colored to the groups, explanation of which appears on the map in the upper lefthand corner.

The distance table, page 2, indicates the average mileage by groups of counties to Portland, to Crescent, to Granger, and to Ogden via the various routes, that is through Portland, the proposed route through Crescent, the present route (3951) through Roseville, and the Alturas route.

These groups and distances correspond with the coloring on the map; as, for illustration, Group 1 on page 2 of the distance
2187 table, covers all of the counties in pink colored, north of the south boundary line of Marion and Polk Counties; the rest is self-explanatory.

(Said document, consisting of 2 sheets and a map, was thereupon received in evidence, marked "Defendants' Exhibit No. 112, Witness Mulchay.")

Before leaving this exhibit I would like to point out, at Salem, Oregon, the capital of the State, 52 miles south of Portland, the general average mileage from all of these shipping points in the counties mentioned is 54 miles, and which is practically the dividing line of the distance as between Salem to Granger via Portland or via Crescent.

Q. When you say Crescent, you mean the cross-State line?

A. The cross-State line. The actual distance from principal shipping point in Polk County is 13 miles shorter via the the cross-State line, but, as will be noted by the map, the traffic all comes in towards Salem, and if you take the general average you find that Polk County falls within a shorter (3952) route through Portland.

In connection with all of these tables I have used the shortest line of mileage, and if I used a mileage through which some of the traffic moves, or via which it moves, a materially different showing would be made. In other words, take Tillamook County business, for instance, where the mileage is figured via Hillsboro and the west side lines south through Corvallis, the traffic is hauled in to our Brooklyn yards and placed in trains at that point, adding some 20 miles, or it would add some 20 miles to the distance which we have used. In other words, we have used 91 miles from Tillamook to Hillsboro, where if we used Brooklyn as the base we would have a distance of practically 121 miles.

This explanation is made for the reason that in taking aver-
2188 age mileages, by taking the shorter mileage I have really reduced the distance in favor of the Portland route, where if I had used the longer mileage I would be down at Albany as the middle point.

Q. Now are those all the exhibits you have on distance?

A. No; I have another one. This is an exhibit containing 8 pages, (3953.)

The WITNESS. This exhibit explains, on the title page, generally what it is, but it shows the general average distance from the 16 counties of western Oregon, including Klamath County, by groups to Denver, Omaha, and other eastern points via various routes over which through rates are today in effect.

It indicates the extent to which the route via Crescent is shorter or longer than the route via Portland, via Roseville or Alturas; the extent to which the routes via Portland, the S. P. & S., the Northern Pacific, and the Great Northern are; also the route via Ogden and the Denver & Rio Grande; and depicts very clearly, in my judgment, the circuitous or short and long line mileage over which through rates are now in effect.

My thought in preparing this exhibit was not only to give the commission a picture of the situation, but, if the theory of this case, as I understand it, is that traffic of western Oregon to eastern points be arbitrarily routed over short line, it will be necessary to cancel all through rate existing via these various routes, because in no other way could the business be moved over the short line unless you would force the shippers or deny the shippers their right to route their traffic. (3954.)

I have shown all the gateways and the mileages on this exhibit.

(The statement, consisting of 8 sheets, was thereupon received in evidence, marked "Defendants' Exhibit No. 113, Witness Mulchay.")

2189 Q. (By Mr. DEY.) And the other one, do you want to make any comment there about reference heretofore in the previous case and this case with respect to Eugene, Oregon, having been taken as sort of a pivotal point?

A. Oh, yes; I overlooked that. Throughout this hearing, also the former hearing, Eugene has been taken as the pivotal point, and the discussion as to mileages has been from the standpoint of Eugene, and these exhibits were prepared for the additional purpose of indicating to what extent Eugene is not the representative point. Further, it shows—and this is all analyzed—that the average mileage to Portland from all of these representative shipping points is 126 miles—124 miles by water grade level line from Eugene as against 95-mile average haul from Eugene to Crescent over the Cascade Mountains, rising 4,800 feet. The mileage tables show the (3955) situation so far as the Portland route as compared with the Southern Pacific haul to Crescent is concerned, that the Portland route in every respect has the advantage to-day.

Exam. ROGERS. Mr. Mulchay, you have been in a lot of these rate cases. In the establishment of routes, what is your opinion as to whether, judging by the previous cases, the Alturas route through Granger to the East can be said to be an unreasonably long route as compared with the cross-State line?

A. No; it can not, because in these various rate cases it depends on what the parties are seeking. They compare short line rates with long line rates, and they demand rates over the shortest line be made applicable over the longest line. And that situation is best explained by taking the rates on lumber from western Oregon territory to the East via the Northern lines, via the Ogden gateway, via the Portland gateway. In 1916, you will find where the Interstate Commerce Commission ordered, and I think properly so, the 2190 same rates on lumber from Willamette Valley territory via Portland in connection with the Northern Pacific, the Great Northern, the Milwaukee, through Portland, and yet, by referring to this table, you will find that the distances to Colorado and many other eastern points are materially longer than the route via Portland in connection with the Union Pacific, and are, in some instances, longer than the Southern Pacific Roseville route. And when the Alturas route operations commence the Alturas (3956) route will have materially shorter distances than over the northern routes.

Yes; in some instances the disparity between the Union Pacific route through Portland and the northern lines is greater than the disparity between the Alturas route and the cross-State line.

The commission opened up those gateways at the request of the Willamette Valley Lumbermen's Association. I think properly so, yes. Traffic can not be covered by distances, in my experience, alone.

My next exhibit is a statement of 8 pages and represents the carload traffic forwarded eastbound and received westbound at points on the Southern Pacific lines in Oregon, including the Klamath Falls

branch, during a period of six months, using each alternate month, commencing with January, the year 1926, and arriving at estimated annual movement by the multiple of two.

The statement is prepared from the same figures that Mr. Wiggin's exhibit of traffic movements was prepared; that is, a statement prepared by our auditor, at the request of the (3957) Oregon Public Service Commission, and I have simply taken—the same figures as Mr. Wiggin's Exhibit 26 and shown them by counties to eastern territory that would be served by cross-State line according to classification of commodities as used in the annual reports to the Interstate Commerce Commission.

On the last page is a grand total of all the traffic.

2191 I may add that it has been checked against Mr. Wiggins' exhibit, and there is no material difference. It is substantially the same. There are some situations, I believe, however, should be called to the commission's attention. For instance, the exhibit does not cover all traffic moving to and from short line carriers, such as the Portland Electric Power Company, the Willamette Valley Southern Railway, whose lines are mentioned on the title page; this for the reason that (3958) those lines have joint through rates in connection with the Union Pacific through Portland, with the S. P. & S., with the Northern Pacific and the Great Northern; hence the business is divided more or less. But this statement includes any traffic that we received to or from that line and moved over the Southern Pacific.

Further, the exhibit does not represent the interchange with any particular line, but it will be noted it shows the cars moving via Portland that are interchanged with all carriers going to the territory that might be served via a cross-State line; likewise the interchange at Ogden includes the business delivered to the Union Pacific, as well as the Denver & Rio Grande. Deliveries at other junctions represent El Paso, Deming, Bakersfield, California junction with the Santa Fe, and other railroads where through rates are in effect.

I have not included in this exhibit any traffic destines to or received from points in the States of Montana, North and South Dakota or Minnesota; this for the reason that there is not only very little traffic that can move to Minnesota via Council Bluffs, but in the second place the general rate situation is such that that traffic would not be available to the cross-State line because the (3959) rates are only applicable through Portland. Mr. Wiggins shows figures from Clatsop County, and Clatsop County is not served by the Southern Pacific. Clatsop County is down at

2192 the mouth of the Columbia River, and is served by the Spokane, Portland & Seattle Railway.

I did not use tonnage for the reason that the auditor's statement was based on billed weights, and the statement was called for within a certain specified time, was gotten out as hurriedly as possible.

The use of tonnage represents a (3960) higher average than would be the case where the cars were reweighed and the actual weights obtained.

For instance, the general average weight of lumber, fir lumber, hemlock, and spruce from western Oregon to the East, is 31½ tons, according to our records based on 1927 shipments, while I believe 35 tons has been used as the average.

The weight is getting less on lumber products on the average all the time. The general average some four years ago was found on our line to have been 33 tons. It is growing less because they are ordering less material per car, and besides the drying of it, kiln drying, etc.

183,478 cars were loaded on the Southern Pacific lines alone in 1926. This includes interstate and intrastate business. (3961.) The cars were divided as follows: Forest products 151,876 cars; or 82.7 per cent of the total; agricultural products 11,555 cars, or 6.3 per cent; animal and animal products 3,644 cars, or 2 per cent; miscellaneous and manufactured, 12,096 cars, or 6.6 per cent. The products of mines were 4,346 cars, or 2.4 per cent. This latter represents gravel, rock—highway building.

Of the total cars loaded 150,180 moved to strictly local points, or points reached by the Southern Pacific and local connections in Oregon, California, Nevada, Arizona, New Mexico, and Mexico; and to Washington, Montana, North and South Dakota, Minnesota, and western Canada. That represented 82 per cent of the total. (3962.)

Q. Well, those territories you have given there, we haven't
2193 local connections that reach those. Those last territories are not reached by the Southern Pacific or local connections? (3962.)

A. Well, what I mean is, reached by the Southern Pacific through other carriers serving the territory where it would not be tributary in any respect to the cross-State line—where the cross-State line could not be used.

(The statement, consisting of 8 pages, was thereupon received in evidence, marked "Defendants' Exhibit No. 114, Witness Mulchay.")

M. C. Woodard, was thereupon produced as a witness, on behalf of defendants, and having been duly sworn, testified as follows: (3963.)

I reside at Silverton, Oregon. I am a lumberman. I have a mill at Silverton, Oregon, Marion County, 15 miles east of Salem, on the branch line running from Woodburn to Springfield. The name of this company is Silver Falls Timber Company, and I am its president. The capacity of the mill is 100,000,000.

I am president and manager of the Western Lumber Company, which mill is located at Westfir, in Lane County, about 3 miles north and west of Oakridge.

I am president, also, of the Westport Lumber Company, a tidewater mill.

2194 I am president of all three of these companies. The Western Lumber Company's mill at Oakridge is on the Natron cut-off, and on the North Fork of the Willamette. It operates in the Cascade Government Forest. The Westport plant is located in Clatsop County, about 26 miles east of Astoria on the Columbia River—what is the Westport Slough, which is about a quarter of a mile from the main Columbia River. We have deep water there. The Spokane, Portland & Seattle Railroad serves that mill. (3965.)

The capacity of the Western Lumber Company's mill on the Natron cut-off is 50,000,000 a year; of the Westport mill 130,000,000. These mills cut fir, with a small percentage of hemlock, probably ten per cent of hemlock.

I have been in the lumber business since 1893, but not all of that time in Oregon. I came to Oregon about 20 years ago; prior to that time I was in the lumber business in Minnesota.

In making shipments from our Westport mill down the Columbia River in Clatsop County we use the Great Northern and the Northern Pacific, mostly the Great Northern on our eastern shipments. We choose to route it that way on account of a sort of friendly relation I have with one of the traffic officers of that road. (3966.) Those two roads own the S. P. & S., which serves our plant. 92 per cent of our Westport cut moves out by water, 8 per cent by rail. With our other two mills it, of course, all moves by rail. From Silverton we ship some into Portland for export; but not from Westfir. I would say about, oh, not to exceed 10,000,000 a year comes into Portland for export, that is, coastwise and export. That varies more or less.

2195 As to what territories our products move from these mills for consumption, the Silverton plant I would say moves about 15 per cent into (3967) we call the Oregon territory, which is practically Portland. That is door lumber, export, or coastwise, and, oh, a low grade of lumber that we ship into some of the retail yards in Portland. The balance of our lumber at Silverton all moves on a—I say "all"; 90 per cent of it moves on a 70 or a 47½-cent rate or better. We do that because we want the long haul, or the long freight rate. The business from Silverton into California is very small. The Westfir plant moves 75 per cent of its lumber into California. And the 25 per cent goes east and local into Klamath Falls.

We route our own shipments. We do not do any routing in conformance with the wishes of our customers; we pay no attention to their routing. As to the route we use on the shipments from Westfir and Silverton that go east, all lumber going into Minnesota territory, or what we call the northern territory, Minnesota and North Dakota, and over into northern Michigan, goes over the northern lines, and the balance of it all goes through the Ogden gateway. What goes to the northern lines comes to the Portland gateway (3968) and is delivered to them there. The balance moves over the Southern Pacific through Ogden. We follow that routing on

that vast quantity of material because we find that that routing is just as good as the northern routing. I say just as good; perhaps there is a day or two longer. Sometimes we get shipments through on the southern routing just as quick as we do on the northern. Our average shipments into Chicago will run right around 12 to 13 days. Our practice is to give the long haul to the carrier that serves the mill.

2196 I am not very familiar with the proposed cross-State line that has been talked of in the newspapers. I just know about it, that is all. Assuming that it is an accomplished fact and built, and is 215 miles or so shorter than the shortest route that the Southern Pacific would have available for us, I don't think there would be an incentive in that for us to change our past practice. (3969.) I am a member of the Willamette Valley Lumbermen's Association.

Cross examination:

None of our mills are served by the Oregon Electric. I can't tell you the number of cars we shipped east in 1927 from our Silverton mill and our Westfir mill. We shipped right around 3,700 cars of lumber and lath out of Silverton, altogether, in 1927. That figure includes all of our lath and lumber shipments. I would say that as many as 2,000 of those go east. As to how many cars altogether we shipped from the Westfir mill in 1927, I haven't that figure and I don't know that I have ever seen it, but our cut at Westfir last year was about 40,000,000 and there was practically no lumber used at Westfir, so that if you divided 40,000,000 by about, (3970) say 24,000, you would get the number of cars that moved out of Westfir. I would say that that would make somewhere around 1,600 cars. And I said about 75 per cent of the Westfir production went to California—we serve the California trade by using the Westfir plant. I would say that the number of cars that may have gone east last year from Westfir would be somewhere around 200.

Q. Now on your business to the East, constituting last year perhaps 2,200 cars as a minimum, have you been solicited, and
2197 are you being solicited, by the Union Pacific to route some of that traffic via Portland and the Union Pacific lines east?

A. Oh, I presume that we are. I don't know that we are, though.

Q. You don't know that you ever have been? (3971.)

A. We are solicited for freight by the Union Pacific; yes.

On our bills of lading covering shipments that we send east at the present time from Westfir and from Silverton, we merely say "Southern Pacific and Union Pacific, Ogden"—we specify the originating line and the gateway Ogden.

I have heard of the construction of the so-called Alturas line of the Southern Pacific Company from Klamath Falls to Alturas.

Q. There has been testimony in this case, Mr. Woodward, that that new line will be completed about the middle of next year and put in operation. That will cut off the distance to eastern destina-

tions on traffic that now moves through Ogden and that will move then through Ogden a little over 200 miles. Do you consider that the construction and operation of the Alturas line of the Southern Pacific will be of benefit to your mills at Silverton and at Westfir?

A. Why, I presume it will shorten our time east somewhat. I don't know as to that.

Q. It will shorten the distance east something like 215 miles (3972) and will make a saving in time in transit, as estimated by other witnesses, of about a day; that is, about 24 hours in time. Do you believe that the use of that line, after it is constructed, will be of benefit to your two mills at Silverton and Westfir, on your eastern shipments, as compared with the Roseville route, 215 miles longer than that?

A. Well, I don't think a day's extra time would mean very much to us.

2198 Q. Do you believe that the construction and use of the Alturas line when built will be of any benefit at all to your Westfir mill?

A. Why, it naturally will quicken our eastern shipments, but I don't know that it will be of any particular benefit to us.

Q. Well, from your standpoint as a lumberman, having mills at Silverton and Westfir, would you be equally well satisfied with the rail service you have now, if the Alturas line never were built?

A. We are just perfectly satisfied with the service that we are getting at the present time.

Q. Well, then, will the building and the operation of the Alturas line be of any benefit at all to your Silverton mill (3973) and your Westfir mill, in your opinion?

A. Why, naturally, it will be of some benefit to us; sure. As to why it will be of any benefit to us, the day's extra time that it took will probably help our customers out to some extent, get our lumber east quicker, but it would not bring us any more business or give us any increase in price for our lumber.

Q. Do you find that your customers are interested in getting speedy delivery of their orders, quick delivery of their orders?

A. Well, about thirty days. Our companies get from eastern purchasers a good many orders that call for immediate shipment. But if our companies were not in a position to ship an order as quickly as some competing mill in western Oregon might do, I don't think it would have any effect on our ability to obtain business from eastern customers.

2199 Q. In recent years have the eastern buyers of fir lumber, as your experience has gone, been expecting and demanding quicker delivery than they did formerly?

A. Yes. I think all lumber is moving faster than it ever has moved—than it moved five or six years ago.

Q. Haven't the eastern buyers of lumber come to expect and (3974) demand prompt delivery of their lumber?

A. They expect a shipment out of the mill at any time inside of thirty days. That is prompt shipment, from 20 to 30 days. For instance, if we receive an order today and get it out in 20 days from from now, that is prompt shipment; that is getting it away from the mill. (3975.)

Q. Yes. Mr. Woodard, as a lumberman, do you see any benefit whatever in competitive rail service in having a lumber mill served by more than one line of railroad?

A. We haven't found it so. We have three mills on one line of rail.

Q. Other things being equal, would you rather have two railroads, or only one, serving the sawmill that you owned and operated?

A. Why, I think I would be just as content with one as I would be with two.

Q. Do you know whether your view in that respect is shared by lumbermen generally?

A. No; I do not.

Q. How do you account, if it were, for the concentration of big lumber operations at such points as Portland, Seattle, Tacoma, Spokane, Bend, all of which are served by two or more lines of railroad?

2200 A. Well, I think as far as Portland is concerned it is the water transportation, and the fact that the river—you can get logs on the river almost anywhere up and down; you have a hundred miles of river; something to tow your logs on. Your housing of your crew—naturally if you have a city which you can house your crew in, why, you have a better chance of getting a crew and maintaining a crew. I don't think the shipment of lumber is taken into consideration at all in locating a sawmill. (3976.) It is where your lumber is and what your facilities are for operating at the place that you manufacture.

Q. Well, now, take Astoria, isn't Astoria located at a point on tidewater convenient for water shipment?

A. Yes, sir.

Q. Isn't Astoria very close to enormous supplies of stumpage?

A. Not now; no.

Q. Well, isn't Astoria in a position where it can get any required amount of logs dumped into the Columbia River and towed? Isn't it advantageously located from the standpoint of log supply? Getting log supply?

A. Not at the present time; no, I don't think so.

Q. How do you account for the fact that there is not such a concentration of lumber manufacturing at Astoria, which is located on one line of railroad and on tidewater, as there is at Portland, or at Seattle, or Tacoma, or Grays Harbor in Washington?

A. Well, I presume that was because of the early location of the sawmills. You take the sawmills here in Portland, they are older mills, and I presume they are located here because of convenience of crew and convenient shipping point, water and rail.

2201 I know that over on Grays Harbor, at Aberdeen and Hoquiam, Washington, there are extensive lumber milling interests. (3977.) They have tidewater so they can ship by water, and they do it by water extensively. And they also have competitive rail service. I don't think the competitive rail service at Grays Harbor has anything to do with the comparative development of the lumber industry at Grays Harbor as compared with Astoria. I think I would make the same statement with respect to the development of the lumber manufacturing at other tidewater points, Seattle, Tacoma, and Portland, as compared with Astoria.

Redirect examination:

In respect to Astoria, it is a fact that the Hammond Lumber Company had a very large plant there for many years and it burned down there two or three years ago. It is also a fact that practically all the fir lumber around Astoria has been cut off. (3978.) I think the Hammond mill—I got here twenty years ago, and they were operating then, and I think I was out here three or four years before, probably 25 years ago—and they were operating at that time. As to whether Astoria had rail service of any kind until the Astoria and Columbia River Railroad was built along in the "nineties," I don't know when it was built. I do know that it was built by Hammond, the same man who had the sawmill down there.

We do not have any question raised by any of our customers asking if we can route our shipments so that they will reach them a day or two earlier, excepting that we do have requests to trace shipments—we do that anyway; we always trace our shipments, follow them right through, but those are few and far between.

2202 I don't think we may look forward out here to any immediate substantial increase in the production of fir lumber. (3979.)

None of our mills run to capacity. Our Silverton plant hasn't run to capacity, of, for seven or eight years. I think there will be a decrease in the production of fir lumber rather than an increase in the next five years over the 1927 figures. Respecting the testimony in this case that while there is now being shipped out of western Oregon a little more than 20,000 cars through the Ogden gateway, with the cross-State line built there will be 60,000 cars of fir lumber available for shipment that way out of western Oregon. I don't know where it would come from, or rather I don't know where it would go.

Recross-examination:

The Hammond mill at Astoria was not rebuilt after it burned down. (3980.)

Q. The timber has all been cut-off that originally was close around Portland, hasn't it?

A. Well, I think there is more timber close to Portland than there is to Astoria.

Q. Do you think the Portland mills are more advantageously situated to get logs than mills at Astoria would be?

A. Right at the present time, yes. The whole Columbia River is pretty well cut up, up to the confluence with the Willamette.

In answering a question of Mr. Dey's I did not know that in the year 1927 there were loaded on the lines of the Southern Pacific, in Oregon, 151,875 cars of forest products. (3981.)

2203 J. H. MULCHAY thereupon resumed the witness stand and testified further as follows:

Direct examination—Contd.

As to the 151,876 cars of forest products that Mr. McCulloch just mentioned in his cross-examination of Mr. Woodard, it includes all forms of forest products, with the exception of the highly manufactured articles such as doors—wood, sawdust, pulpwood, logs and lumber. Slabwood, cordwood, all species of forest products.

I believe I stated that there was 150,180 cars moved from what is territory not tributary to the cross-State line. This leaves 33,288 cars, as shown on the last page of the Exhibit 114, that I have credited to the cross-State line. Of this eastern movement, 27,148 cars, or approximately 83 per cent, consists of forest products; the (3982) balance, 4,398 cars consists of agricultural products.

The eastbound movement of this traffic is divided, via Portland, 5,926 cars, or 18 per cent; via Ogden, 25,712 cars, or 77 per cent; via other junctions, principally through El Paso, Deming, New Mexico, Bakerfield, California, 1,650 cars, or 5 per cent.

On the same page of the exhibit it will be noted that there was 3,664 cars of westbound traffic allocated to the cross-State line. The movement of this westbound traffic was 2,016 cars, or 55 per cent; via Ogden, 1,226 cars, 34 per cent; via other junctions, principally through El Paso, et cetera, 422 cars, or 11 per cent.

We go after the westbound business, and the business that we secure westbound, the majority of it, the consignees in this ter-
2204 ritory favor us with the routing on it, or routing instructions favorable to our Ogden route, but the eastern lines, that is, the lines originating the traffic, for instance, the Union Pacific, or the Northern Pacific, the Great Northern, they are striving the same as we are for their longest haul, hence the movement via Portland westbound naturally goes in greater proportion, via Portland, because of that fact. (3983.) There are more of them that come in here to Portland who go after the westbound business; and there is another element. For instance, while we have agencies in the East that are active in solicitation, you take the Northern lines, for instance, and the Union Pacific, their rails actually touch many of the points where the business originates—for instance, you take the Burlington, working closely with the Northern Pacific and the Great Northern, they serve all of the Mississippi Valley, have their own rails into Chicago, Kansas City, St. Louis—any traffic that we might have to secure in competition with them must be solicited through other lines and out here with the consignees. Naturally, a shipment

originating on Burlington tracks, they have the greater opportunity to move it via Billings and Minnesota Transfer in connection with the Northern lines. This covers the business moving via all lines through Portland. That is all the westbound transcontinental business we get. Through Ogden there are 1,226 cars a year.

We do not participate in a great deal of the Portland traffic. (3984.)

Of the total eastbound movement of 33,280 cars, 81 per cent, as I stated, consists of forest products, showing that outside
2205 of forest products there is very little other tonnage moves eastbound to support the Southern Pacific or any other railroad. We are more dependent than ever upon the long haul of forest products, because the Panama Canal is taking the other traffic, and this business is badly needed to support existing lines.

Reverting to the exhibit, page eight, and also with reference to Exhibit 112, and refer to the map, the last page, take the territory colored in pink, being the counties of Polk, Marion, et cetera—of the total traffic that we originated during the year 1926, 88,576 cars, or 48 per cent, originated at points within that territory. Now, of the movement to eastern territory, 14,516 cars moved from those counties via all routes, or 44 per cent of the total eastbound traffic.

As I stated earlier, if distance is to control, the short-line mileage is via Portland, and none of the traffic, under such theory, would be tributary to the cross-State line. Further, there is colored in yellow the counties of Josephine and Jackson. The distance via Roseville at the present time on an average basis is but 42 miles greater than (3985) would be the route through Crescent. This traffic, for a difference of 42 miles, considering the fact that the Roseville route is the line of least resistance, even though a few miles longer, I don't believe that any of it—and it is principally fruit, pears and apples—would move via the cross-State line.

I say the Roseville route is the line of least resistance because the service rendered south in the case of fruit is such that we have 10 cars out of the Rogue River Valley, or we have 20 cars, or 5 cars, it reaches Roseville, goes into the solid fruit trains, moving to the
East every day, 2 or 3 of them, every day of the year, where
2206 if the business moved via Portland or moved via the cross-State line there isn't the opportunity to move it in the same fast—or give it the same fast service. I refer to service and not the physical characteristics.

Jackson and Josephine Counties are only 42 miles difference around the Roseville route, on the average, than by the cross-State route. I have got it checked out here. (3986.)

This statement can be analyzed almost any way you wish. It is made up in such way that it shows all the business from each county, and with those observations I think we can pass on.

As to the Alturas line, I did considerable work in connection with the preparation of the application that was made to the commission

for the construction of that line. As to the purposes that that line will serve, there are several of them—I would say three permanent—the first being that it enables a material saving in the cost of handling through traffic; it will also assist us in securing considerable new business in the Portland district and other western Oregon territory that we serve, both east and west bound. Second, it will develop new business; and, third, it will perpetuate the Nevada-California-Oregon Railway, which it seems the Interstate Commerce Commission considered should be maintained, because they declined to approve an application for abandonment several (3987) years ago, well, in fact, they required the Southern Pacific to increase divisions, division allowance, to the N.-C.-O. 10 per cent to assist in maintaining it. The line also will tap a large acreage of farming lands, reclaimed lake beds in the Tule Lake Valley. However, this traffic is small and would not warrant the construction of the Alturas line in and of itself. The line can only be sustained largely by
2207 the through business, but with the through business, with such local business as can be picked up and increased business expected from the N.-C.-O. Railway, that the line is justified.

The western Oregon business which I said was relied upon in the construction of this line, and the operating saving in the handling of that business under the Roseville route, is exactly the same business that has been described here and that is relied upon to support the cross-State line. There has been a changed condition come in, however, and that is the Great Northern are now at Klamath Falls, and is a strong competitor for the business that has heretofore moved over the Southern Pacific lines to and from that territory. While, of course, we expect to maintain, continue, and enjoy a large tonnage, there is no reason why the Great Northern (3988) can not be relied upon to materially reduce our taking; therefore, the Alturas line will be more and more dependent upon western Oregon for tonnage.

The case I referred to when I mentioned about the Nevada-Oregon being perpetuated was Finance Docket 1796, reported in 72 I. C. C. 433, dealing with the application for the abandonment of the line, and the division case, being I. C. C. Docket 13549, reported in 73 I. C. C. 330. I have some comment here, but it is unnecessary, as you state; they speak for themselves.

I have given some consideration to Mr. Teutsch's exhibit—Exhibit 1 in this case. The item of canned goods—Mr. Teutsch in his exhibit states that there are 254 cars available at the present time in the counties of Linn, Benton, Lane, Douglas, Coos, and (3989) Curry. He also estimates that within five years there will be 155 addi-
2208 tional cars, including 28 cars from Jackson County, making a grand total with five years, including the present, of 409 cars. The total cars of canned goods from the canneries located in the counties mentioned in the year 1927 was 498. Only 93 of this total moved to eastern territory, and it would seem clear that an estimate of 250 cars from those counties is overly optimistic, but, to carry it further, there is an increasing pack of canned goods, just as he showed

in his exhibit. However, the increased movement by rail to the East is growing less in proportion to the increased pack. For instance, in 1920, out of total of 1,279 cars loaded on our rails in Oregon, 316 cars, or 25 per cent, moved to eastern territory by rail. In 1927, of a total of 1,973 cars, 405 cars moved east by rail, or 21 per cent of the total. In other words, the pack increased from 1920 to 1927 35 per cent, or 694 cars. The eastern rail shipment, however, was only 89 more cars in 1927 than it was in 1920, and that covers all the territory in Oregon served by the Southern Pacific rails, and I might digress here for a moment to point out that I believe Mr. Norton testified in this case that he trucked canned goods from Roseburg to Portland, which is a fact. (3990.) That is 198 miles. The port of Portland reports, for the year 1920, 8,302 tons of canned goods shipped out by water, an equivalent of 276 cars of 30 tons each. In 1927 the water tonnage was 59,027 cars, or 1,967 cars on the same basis.

Q. An increase of about 800 or 900 per cent. (3991.)

A. Well, I didn't figure it out—yes. I would like to analyze this canned-goods situation further, because there has been a great
2209 deal made of it. Of the total pack in 1927, 1,750 cars originated at canneries in the Willamette Valley, Cottage Grove, and north. This represented 90 per cent of the total cars loaded. On a weighted basis, taking the number of cars from each cannery, applying the actual mileage thereto, or weighing them, the average haul to Crescent would be 172 miles as against the average haul to Portland of 48.2 miles. In other words, on a weighted average mileage basis, and which is used very frequently in rate cases, all of the canned-goods tonnage should move to Portland. I would like to carry this a little further and point out that of the total cars that were packed or shipped 1,400 originated at canneries Salem and north. In other words, over 70 per cent of the total cars shipped originated within 52 miles of Portland, and these canneries shipped 298 cars east of the 405 from all of the territory. In other words, 73½ per cent of the toal, under those circumstances, that was carried all the way through there, was not available tonnage for eastern rail shipment in the canned goods business.

As to a consolidation tariff restricting the movement of canned goods (3992), I believe Mr. Lounsbury mentioned canned-goods tariff that we have for consolidation—a special tariff on canned goods for consolidation. We make reduced rates on canned goods for consolidation purposes. If one cannery is producing canned berries and cherries and they desire to consolidate some with a cannery that is putting up pears and apples, we make them low rates for that purpose. This tariff does not restrict the routing to the Southern Pacific, so far as gateways are concerned, but the rates are applied on canned goods whether the business is moved out via
Portland or any other gateway. I simply want to correct the
2210 impression that the tariff is an arrangement designed to force the business to the Southern Pacific long haul.

I have been operating in this territory a long time. It is not within the realm of possibility that any such quantity of canned goods will be available as Mr. Teutsch predicts. Not for eastern shipment. (3993.)

The situation with respect to dried fruit is quite similar, only more pronounced than in the case of canned goods. Mr. Teutsch states there are 156 carloads of dried prunes available in the counties of Linn, Benton, Lane, and Douglas, and that there would be an additional tonnage available within a period of five years 22 cars. Now the tonnage is available; there is no question about the tonnage being in existence. It exists. However, this traffic moves out by water. In the year 1920 out of a total carloading of 330 cars, 210 cars moved to eastern points via rail, or 64 per cent. In 1927, 640 cars were loaded in all the territory. 136 cars only moved to eastern points, or 21.3 per cent. In other words, while in 8 years the number of carloads for shipment increased 100 per cent, the percentage that moved by rail decreased 200 per cent.

Now the port of Portland reports show in 1923, 11,809 tons, equivalent to 394 cars, by water. In 1927, 31,197 tons, equivalent to 1,039 cars. I have the figures covering all the intervening years here, but it carries out the same identical comparison, that (3994) the dried fruit tonnage is moving more and more by water. And in the last year one of the largest packing plants, the largest packers of dried fruit, moved their plant from the Roseburg district, from Polk County, Dallas, to Portland, and much of the dried fruit is
2211 coming in here to be packed in that plant so it will be on tidewater.

Broccoli: I want to read its shipments into the record since the year 1920.

Total cars loaded, 1920, 25 cars, eastern movement 20 cars.
In 1921, 55 cars, 51 cars eastern movement.
In 1922, 105 cars, 87 cars eastern movement.
In 1923, 249 cars, 217 cars eastern movement.
In 1924, 330 cars, 277 cars eastern movement.
In 1925, 58 cars, 47 cars eastern movement.
In 1926, 958 cars, 817 cars eastern movement.
In 1927, 297 cars loaded, 241 cars eastern movement.
In 1928, 303 cars, 175 cars eastern movement.

Mr. Teutsch's exhibit stated that there was available at the present time 419 cars of broccoli, and estimates 419 cars apparently annual proportionate increase during the next five years. He also estimated 150 cars was coming in from Coos and Curry Counties.

Broccoli and winter cauliflower is grown in many (3995) localities of the United States; in fact, there is nothing uncommon about it at all. It is a highly perishable commodity. While considered hardy, at the same time 1926 was the peak year and it is not expected any tonnage beyond 200 or 300 cars in the future. The growers are discouraged because they have had four bad years, 1926 being the

only good year that they have had. They are not going to plant. Take, for instance, 1925: The estimate from the plantings of 1925 was 1,400 cars, but a cold spell, freezing weather in December, 1924 cold rains, winds of January and February, reduced the crop, practically wiped it out. In 1927 acreage planted warranted, by conservative estimate, 1,200 cars. I would like to erase that; make
2212 that 1927 the estimated rail movement from the acreage was 450 cars. The farmers reduced their plantings materially. The actual shipment was only 330 cars. The decrease was due to high water, flooding out many of the fields, the heavy rains in February interfering with the harvest. The 1928 plantings warranted an estimate of 420 cars. 303 cars were shipped, but only 175 to eastern territory. The crop was cut down by the sudden warm spell this year, as everyone knows, causing the broccoli to mature too early. It became No. 2's, largely, and was not suitable for the eastern market in any particular quantities, and much of it was not shipped. (3996.) I do not think that even if the cross-State line were built this broccoli would move over that line in any apreciable quantity; this for the reason that much of it is sold for diversion en route, or, rather, it is sold while in transit, the same as considerable other fruit products.

Portland is the natural gateway for the fruit of western Oregon grown in the Willamette Valley or adjacent thereto. I mean fresh fruit. Much of this traffic comes in here, and diversions are placed, to be moved to Seattle, to Spokane, British Columbia, or east from here, and that is the way broccoli is handled to a large extent. (3997.)

It seems throughout this hearing there is some mystery about the reason why this broccoli moves through Portland. I would like to clear it up. There is nothing mysterious about
2213 it. One of the largest shippers of broccoli—there are three of them in the Roseburg district—came to us in 1923. He was building a packing plant, a packing house, and wanted us to put in a sidetrack to serve that house without cost to himself. We declined to do it, because if we had done it it would have been an unlawful discrimination. Now, in 1926 the big crop coming on, he thought he would penalize the Southern Pacific. Instead of sending the business by Roseville, as they had done in the past, he instructed all of his business, and notified us it would move via Portland. Well, gentlemen, this business moves over a period of about 60 days. There are a certain number of cars to be moved out every day and there is a certain amount of special service that has to be given. Now, if we had divided that business—the other shippers were perfectly willing to (3998) send their traffic as they had in the past, via Roseville, but had we divided that business and taken part of it southbound, the other northbound, we would not have been able to give the service in either direction, dislocated power, and so on. So we went to these other shippers and voluntarily—

we voluntarily went to these other shippers and told them, "Now, gentlemen, we are interested in giving you the service. Instead of specifying on your bill of lading the Ogden gateway, route it as you wish, but leave the gateway open and let us take the business via the route over which we figure we can give the service." Now, gentlemen, that is all there is to this broccoli routing via Portland. I think I did right. The business has continued to route this way, although we do handle some of it via Ogden, as the records will show. But you can't give service to broccoli, or
2214 anything else, by splitting it up into small parcels. It would be more costly to give a special service in both directions, and there is nothing that requires more service than fruits and vegetables—green fruits and vegetables. I might add that this broccoli is grown in the Umpqua Valley. There is some 20 miles between the northerly end and the southerly end of the district and the southern end of the valley where this broccoli comes in, around Riddle, Myrtle (3999) Creek, etc. It must be all gathered to a central point. When we move it one way we can handle it better than we can when we handle it in split lots and gather it together.

I have some quotations of the Chicago market on broccoli from day to day. I took the chief market days, which are Mondays, Wednesdays, and Fridays. I can read it that way, or read it consecutive in days. Tuesday, February 14th, 1927, according to reports of market prices by the United States Department of Agriculture, Bureau of Economies, Bureau of Markets: Cars on hand, 47 from central territory, central California, 16 from southern California, fancy ranging from $1.35 to $1.50 per crate; fair $1.25. February 15th, 28 cars from central California, 20 cars from southern California, 2 from Oregon; fancy, $1.25, $1.40; fair, $1.00 to $1.20. February 16th, Thursday, 41 cars on hand from California; fancy ranging from $1.25 to $1.35; fair from $1.00 to $1.20. Saturday, February 18th, 16 cars on hand from California (4,000), prices ranging from $1.25 to $1.35 for fancy; $1.00 to $1.10 for fair. (4001.)

Here is Monday, March 5th, 63 cars on hand, 5 of which from Oregon, 1 from Texas, balance from California; fancy ranging from $2.00 to $2.25; fair $1.75. March 6th, 76 cars on hand, 11 from Oregon; fancy ranging from $2.00 to $2.25, and fair $1.75. Wednesday, March 7th, 75 cars on hand, 11 from Oregon, prices
2215 ranging, central California, southern California; $2.00 to $2.15 for fancy, $1.85 to $2.00 for fair. Oregon, $2.25, new style crate; Oregon-Texas standard size crate, or old crate, $2.00, $2.15, $1.18, $2.00, the same as California. March 8th, 64 cars on hand, prices ranging the same as on Wednesday, March 7th, with the exception that the $2.25 for fancy on Oregon broccoli had dropped to $2.00.

Generally the market jumps up and down from day to day, depending upon the supply on hand and other elements.

Q. Ranging probably 25 or 50 cents a crate?

A. These figures are all available by inspection of reports of the Department of Agriculture. (4002.)

Those prices were at Chicago.

I think about 400 crates of broccoli are loaded in the ordinary car. The weight is slightly less than 20,000 pounds. The minimum is 20,000 pounds.

Seeds: Mr. Teutsch estimates 28 cars of seed in Lane, Linn, Lincoln, and Benton Counties. It is true there is considerable production of clover seed, vetch, rye grass, in western Oregon. However, this traffic, like the dried fruit and the canned goods, moves largely by water. Taking the entire territory, that is I mean all western Oregon points on the Southern Pacific, we had 142 cars in the year 1927. Of this total 76 cars moved to Portland for export by water; or exactly 50 per cent. 30 cars moved to California, 4 cars to Seattle, 32 cars to eastern territory. Now the fact is that so far as the counties mentioned by Mr. Teutsch, the eastern movement consisted of but 9 cars from the counties which he mentioned, as against his estimate of available tonnage at the present time of 28 cars. The port of Portland reports show that the intercoastal (4003)
2216 movement for the year ending November 30th, 1927, was 2,526 tons, or an equivalent of 168 cars, 15 tons each. The records of the movement of seed, its growth, etc., cannot be depended upon for any amount of tonnage in the future.

Wool: I will not take any time particularly to discuss wool, but Mr. Teutsch estimates 9 cars of wool being available for eastern movement from Klamath County. There was no movement, although the records show that in 1926 there was 9 cars out of Klamath County, 8 of which, however, moved to California, and 1 to Portland. The eastbound movement of wool from these Pacific Coast States will be entirely by water. The rates are adjusted. Besides that, Portland has become the real wool market of the Pacific northwest, and of the Pacific coast. The readjustment of rates when the carriers were denied continuation of fourth section relief, in the general wool rates investigation July 8, 1924, reported 91 I. C. C. page 235, so changed the conditions that the carriers by rail will not move the business to the East.

Celery and lettuce: 50 cars of lettuce were estimated by Mr. Teutsch from Coos and Curry Counties, and also some celery. I doubt very much, in fact my advices are from authorities at the agricultural college, and from people who have been interested in a monetary way in efforts to grow (4004) celery and broccoli, also lettuce, in the Coos Bay territory, which has been a part of some efforts we have ourselves made in the past three years, that there is something in the soil, or climatic conditions, the fog, that will not permit of its being grown in marketable quantities. The celery district of Oregon is in the Lake Labish territory, which extends east from the Oregon Electric station at Quinaby to approximately

Mt. Angel on the Wodburn-Springfield branch of the South-
2217 ern Pacific. The Southern Pacific main line crosses through the bottom or lake bed about six miles north of Salem. This celery is grown largely by Japanese. It moves part from Quinaby station on the Oregon Electric, part from Brooks station on the Southern Pacific. Both of these points, Brooks and Quinaby, are 44 miles south of Portland. In 1927 the movement from Brooks was 393 cars to eastern territory. 51 of these cars moved east via the Southern Pacific lines through Ogden, 232 cars moved east via Portland, 20 cars moved to Texas via the Southern Pacific through El Paso, 63 cars moved to California.

I am not going to quote the number of cars divided between the different carriers at Portland, but a very substantial part of the movement was turned over to the S. P. & S. Railroad and taken east via that line over the Great (4005) Northern. The reason for this is that the growth of celery first began at Quinaby, or in the vicinity of Quinaby. The Oregon Electric built a packing shed for the packers, leased it to them, and they favor that line with their shipments, that is the Oregon Electric-S. P. & S. lines with the shipment from Quinaby. Likewise they favor those lines on the business that originates with the Southern Pacific that goes east through Portland. By referring to one of these distance tables I have placed in here, you will find that the mileage is longer via the route the majority of this celery moves than it would be via Portland and the Union Pacific, the distance not making any particular difference in the routing of the traffic.

Walnuts and filberts: An estimate of 7 cars is made as available
2218 from Linn and Lane Counties at the present time; within five years 11 additional cars from Lane County. That prediction is Mr. Teutsch's. I think he is overly optimistic. So far the production of walnuts and filberts in the Willamette Valley has been largely in the Yamhill district. In any event, the total movement in the year 1927, carloads from Lane, Linn, and Yamhill Counties, was 7 cars, 5 of which originated in Yamhill, one in Linn and one in Lane. Three cars moved to Chicago, one car to Seattle, three cars (4006) to Spokane and Boise. I am satisfied it will be a good many years before we have the tonnage that he estimates from Lane County or Linn County.

I will be glad to leave out green prunes. The hop industry at one time was a very important one, involving from 1,250 to 1,600 cars per annum. The since the passage of the Volstead Act the hop industry is less than half of what it used to be. But the carriers to protect this traffic to the rail lines—about 70 per cent of it moves to England and Germany—we were obliged two years ago to establish a special export rate of $1.75, or 75 cents per 100 pounds less than the regular rate, in order to hold this traffic away from the boats. But I have on my desk at the present time advices that we are likely to lose considerable of this business this year to foreign water carriers moving through the canal.

Barreled strawberries: This is an industry that is developing, but an estimate of 87 cars from Linn County I believe is overly optimistic. In any event, the trend of this (4007) traffic is by

truck to Portland for storage in the cold storage warehouses here. I do not know what the Oregon Electric handles, but so far as the Southern Pacific is concerned we have only handled about—
2219 last year six cars and 10 cars of this season's business. This all originated at Salem. We handled no business from Linn. But the reason why I speak of the trucks is because both the Oregon Electric and ourselves were obliged to reduce the rate on barreled berries from Albany and Linn to Portland in order to hold some of this traffic to our rail lines as against the trucks. That reduction of rates was made a few months ago.

Livestock: The Southern Pacific originated during the years 1920 to '27 an average of 1,540 cars of livestock per annum. That is, when I say originated, I mean they originated it in the State of Oregon exclusive of Klamath Falls. A general average of 30 per cent moves to California, 40 per cent moves to local points, including the Portland Union stockyards. An average of 29 per cent moves to Puget Sound. The largest eastern movement of Southern Pacific stock—of stock originating on the Southern Pacific, was in 1922, when there was 38 cars of sheep forwarded from the Umpqua Valley to the East, and in 1926, when 14 cars of lambs and sheep moved from the same county. Practically all of the livestock of the Klamath district goes to California. (4008.) That is true since the Cascade line was opened, the last two years. It is continuing to go to California largely.

During Mr. Lounsbury's testimony I gathered there might be some misunderstanding as to how the Southern Pacific reached the Portland Union stockyards. On any stock originating on our rails or moved over our line we apply through rates to the yards, which rates apply joint with the Union Pacific through east Portland, or joint with the S. P. & S. through Portland, west side.
2220 Likewise stock may be shipped out of the stockyards to points or via the Southern Pacific, subject to through rates from the yards via the same lines, the Southern Pacific absorbing the switching charge, with the exception of a small arbitrary that is added to make the through rate. I make this explanation in order that there be no misunderstanding about the Southern Pacific's rails, or the methods under which they reach the yards.

An estimate of 40 cars of bulbs from Josephine County to the East: For a period of 18 months or, well, a period of 19 months, January 1st, 1927, to July 31st, 1928, there was two cars of bulbs moved from Grants Pass, one to Benton Harbor, Michigan, two to Wilson, New York. Now the 40 cars estimate is potential within five years. I hope that it reaches that magnitude, but it is questionable. (4009.) I have grave doubts of it doing it. I don't think there is a possibility of growing that quantity of bulbs in the Grants Pass district.

I prepared, to go with my explanation in connection with the corn and flour and cereals and potatoes, a statement showing the production of cereals and potatoes, according to reports of the De-

partment of Agriculture, years 1920 to 1926, that I would like to offer.

(The statement so offered and received, consisting of four pages, was thereupon marked "Defendant's Exhibit No. 115, Witness Mulchay.")

The statement is self-explanatory, but the object of it is to show that western Oregon is a heavy producer of cereals and potatoes, and, as I will show further on, export considerable tonnage.

Mr. Teutsch estimates there is now available 748 cars of feed
2221 grains and prepared feeds in eastern Idaho for movement to western counties in Oregon, Linn, and south, with a potential added movement, five years, 223 cars, or a total of 971 cars. (4010.) I have no doubt, perhaps, the cereals are grown in these quantities. In fact, I know nothing about it. But from the consuming standpoint I do not believe that Mr. Teutsch's estimate of moving the traffic to western Oregon is correct. I neglected to state there that he estimates 385 cars of corn is also ready for immediate shipment, assuming that western Oregon is to consume this amount.

Dealing with corn first, in the year 1926, total movement of corn, points on the Southern Pacific's entire line, was 479 cars, 227 of which moved to the counties north of Marion and Polk, or a territory where the distance via Portland is shorter; the counties of Linn, Benton, and Lincoln, 51 cars; the counties of Lane, Douglas and Coos, 155 cars; 46 cars to Josephine and Jackson. It would be necessary for Lane County, to carry out Mr. Teutsch's estimate, to materially increase its importations, because it imported 93 cars in the year 1926, while the estimate is some 385 cars to Lane County, or four times greater tonnage than actually moved in 1926, which was a good year. Further, it will be necessary for the States of Montana and South and North Dakota, and Nebraska and Kansas, that is the dealers in Portland and the Willamette Valley to buy corn in those territories, to go entirely out of the western Oregon business. (4011.)

Feed and grains: Southern Pacific receipts, 1926, flour and feed, in western Oregon, is 588 cars. The estimate of 748 cars for east-
ern Idaho to western Oregon counties is certainly too high,
2222 as I doubt that they are prepared to consume that much at this time. At any rate, the estimate was made for Linn and south. Linn County, Benton, Lincoln, all territories south, including Klamath County, consumed of flour and feed in 1926 277 cars. Now, there is a large exportation of grain from western Oregon to Portland. There were 437 cars loaded on our lines of oats in 1926, and 536 cars of wheat. In addition to this, the flour mills and grain dealers of Portland tell me there were approximately 17,500 tons of wheat and oats moved into Portland last year by auto truck, which is equivalent to 450 cars. Now, with all the production that there is in western Oregon, the opportunity to compete, I have grave doubts of western Idaho and southern Idaho shipping into

this territory any appreciable quantity, although there is considerable flour and grains milled in transit at Portland, moved down the valley, but it would continue to move via Portland.

Hay: The estimate calls for 116 cars of hay in Lincoln County. That is Mr. Teutsch's estimate. During the year 1927, Lincoln County imported 42 cars of hay from all sources. In other words, the estimate is for almost three (4012) times more than what was consumed in 1927. 1927 shows a decrease of 10 cars over the movement in 1926.

Lane County: The estimate indicates 40 cars of alfalfa hay for consumption. During the period 21 months, September 1, 1926, to May 31, 1928, Lane County imported 51 cars of alfalfa hay, 10 of which originated at Klamath Falls, two in the Bend-Redmond district, and the balance eastern Oregon and Washington. While there is some holding, however, that there is to be an increasing consumption of alfalfa hay in western Oregon, I believe the actual
2223 facts point directly to the contrary. There is over 1,000,000 acres of lowlands in western—in fact, there has been about 150,000 acres reclaimed through drainage in the past five years. This land is excellently adapted to the growth of alfalfa hay. Washington and Yamhill Counties are now producing alfalfa hay, and with the reclamation that is going on with drainage I feel certain that instead of importing alfalfa hay into western Oregon it will be growing all they need for local purposes within a few years, but, in any event, with the hay of the Rogue River Valley, the Klamath territory, the Bend-Redmond district, the Stanfield irrigation district, I question the opportunity for western Idaho, southern Idaho, Harney County, et cetera, to send very much hay to this western Oregon.

Douglas County, it is estimated 480 cars of hay—or Coos (4013) and Curry—with a potential increase of 240 cars within five years. Now, the total movement into Coos County of hay from all sources in 1926—that is, I mean all sources so far as rail haul is concerned—was about 144 cars. Of this total, 133 cars originated on the Southern Pacific lines in western Oregon, 19 cars being shipped from Lane County and 67 from Linn County of that 133. Mr. Teutsch's information with respect to hay going into Coos and Curry Counties is entirely overoptimistic. It is right directly against the teachings of the Oregon agricultural college to-day, and, happening to be somewhat connected with development work myself, I know that they are producing more of their own forage in Coos County, and the encouragement and the teaching is all in that direction. There can be no such movement. There never has been a movement in its history into Coos and Curry County of 480 cars of hay in any one year, and that was even before the railroads were there.

2224 I think that covers all I have to say in regard to the potential movement of tonnage as far as our lines are concerned. (4014.)

In connection with my testimony on these products of agriculture, I recall that Mr. W. G. Ide testified that with respect to the lands in central Oregon under Federal ownership and open to entry, that he had a circular letter which he kept prepared and on hand with which to answer inquiries made by prospective settlers. I have asked Mr. Ide to let me have copies of that letter.

(Said letter was thereupon received in evidence, marked "Defendants' Exhibit No. 116, Witness Mulchay.")

I have prepared some exhibits on lumber. I have prepared a statement, consisting of four pages, showing the amount of standing timber in various counties in western Oregon, including the Klamath Basin, the number of sawmills in each county, their potential cutting capacity on an eight-hour per day run, also the number of mills and their capacity located at Portland and along the Columbia River (4015) between Portland and Astoria, with some other added information that I thought might be of value.

I also prepared another statement showing the amount of forest products produced by mills in the States of Oregon, Washington, also British Columbia, during the calendar years 1923 to '27, inclusive, showing the distribution as between shipment by water and shipment by rail during the same period.

(Said two statements were thereupon received in evidence, marked respectively, "Defendants' Exhibit No. 117, Witness Mulchay," and "Defendants' Exhibit No. 118, Witness Mulchay.")

2225 The reason I have prepared these exhibits is because there has been so much said in this record, also the former hearing, about the potential fir lumber tonnage, but without consideration being given, in my judgment, to the detail of where the lumber was to be cut or how it was to move and where it was located, the idea being throughout that Eugene, Oregon, was a central point. I will not take any extended time in an analysis of this statement, except to point out that the Portland-Columbia River mills have a potential cutting capacity (4016) of 8,752,000 board feet today. There are also 10 mills on Coos Bay with a potential cutting capacity of 1,470,000 feet. To these can be added properly mills at the mouth of the Siuslaw River, at Reedsport, and on Yaquina Bay and on Tillamook Bay. The rail output at Coos Bay does not exceed 10 per cent of the cut. About 50 per cent of the cut from the Siuslaw, Reedsport, Yaquina, and Tillamook Bay mills moves out by water. Now, the total potential cut of these tidewater mills is in excess of 11,000,000 feet per day, or 3,300,000 feet per annum, representing on an average car of 25,000 feet 132,000 cars per annum.

In the other statement—that is Exhibit No. 118, it will be noted that for the five-year period Oregon has exported by water consistently about 29 per cent of its cut. The State of Washington, on the other hand, has exported approximately 50 per cent. As is well known, the timber immediately adjacent to Grays and Willapa Harbor and on Puget Sound—all in the State of Washington—is decreasing, and as time goes on and mills along the Oregon coast

and Columbia River will be called upon to furnish an increas-
2226 ing amount of tonnage by water. This situation has been clearly apparent for a number of years, and, regardless of what may be otherwise stated, there is every (4017) tendency, every indication, for an increasing cut of timber in western Oregon at tidewater mills.

Our log hauls to Portland and Coos Bay and Tillamook Bay are increasing, regardless of the efforts we make to encourage mills to locate in the Willamette Valley. Our log hauls to Portland at the present time range from 65 to 75 miles, and when the short line logging roads are taken into consideration the distance averages from 75 to 90 miles. On Coos Bay the log hauls there range from 40 to 50 miles. In the case of the Coos Bay Lumber Company, however, the log haul in their case at the present time is 91 miles; that is, using the Southern Pacific line from Powers to Marshfield, plus the distance to their logging road. The overland rail tonnage is not increasing. It is not going to increase in any appreciable quantity. According to the statement which all the carriers west of the Cascades furnished to the West Coast Lumbermen's Association covering the shipments in the years 1925, 1926, and 1927, it shows that in 1925 the total movement west of the Cascades via all lines was 102,105 cars—Oregon and Washington—and covered all territory east of the Oregon-Washington-Idaho State line and south of the Oregon-California State line. In 1927, two years later, the movement was 105,324 cars. (4018.) This year there is every indication that the movement will be less than it was in 1925, predicated upon the first six months of the Southern Pacific in 1928.

In talking in my daily business with people who are interested
in timber holdings, I am daily confronted with the question
2227 of log hauls to Portland. I have on my desk at the present time four requests, insistent requests, that we haul logs a distance of 125 miles in one case, and 175 miles, in the vicinity of Eugene, and it is a question of every effort that I have made to encourage the building of a mill, but I am told that timber, comprising in excess of 2,000,000,000 feet in one large holding, that it would cost to build a mill, town site, logging roads, and, at the present day which would be necessary, a pulp mill, would cost in excess of $7,000,000, and the parties insist that the timber must be moved, for the reason that part of it is owned by an estate and in the settlement of that estate some disposition must be made of the timber. That is only one of similar situations that exist. In addition to that, there is coming into this country the development of the pulp and paper industry. All of these pulp and paper mills of any size are being located on tidewater. They are drawing their raw material from the interior. We hauled last year 2,700 cars of logs in gondola cars from our Coos Bay branch to Oregon City, a distance of 187 miles, to (4019) feed the paper mill at West Linn, whose outbound product moves entirely by water, very little of it

moving by rail. That is about 18 miles south of Portland. They move timber from the lower river by their own boats to the mill, and they also move spruce into the mill from points on our rails. They move the finished product by their own boats. We moved about 400 cars of spruce wood from our Tillamook Branch—in fact, Tillamook itself—to Oregon City last year for the manufacture of paper. All of these conditions, they dovetail in with the fact that tidewater is becoming more and more a central location for industry.

None of these people have put up to me the proposition that they do this because there is service by only one railroad to their
2228 timber. There is nothing in that proposition. To the contrary, they want to locate or sell their logs to mills located in or immediately adjacent to large (4020) centers like Portland, where they can sell their products, their slab wood, and, as is a well-know fact, some of the mills in the city of Portland, their overhead, a considerable portion of it comes from their sale of sawdust and slab wood. In fact, that is a matter of record in a case involving lumber rates at one time to the east. Further, the fact causes the price of logs in the Willamette River to be from $2.50 to $3.00 per 1,000 feet higher than the mills in the interior can afford to pay.

I would like to add this, and that is, that, summed up, I don't anticipate there is going to be much increase in the production of lumber in the interior along the rails, because the intercoastal and off-shore movement, the opportunity therefor, makes tidewater so much more attractive location with the owners of the timber, that the mill that will cut it will be on tidewater. I might also add this, Mr. Dey, that there is at the present time consideration being given to movement of a large tract of timber 40 miles west of Portland through the building of a logging road to Tillamook and towing the logs from Tillamook up to Grays Harbor. There has been a good deal of towing of logs to California. (4021.)

Q. In rafts?

A. That has taken place here for a number of years, both from the Columbia River, the mouth of the Siletz River, and from Coos Bay.

As to the situation as it existed when the cross-State line was first surveyed, and as it exists to-day: There has been a material
2229 change in conditions. First, during the war and prior thereto the carriers had authority to make rates on transcontinental traffic in competition with water carriers, operating, first, around Cape Horn and over the Tehauntepec route, and through the Panama Canal. During the war, however, as reported in fourth section application of transcontinental roads, decided June 30, 1917, 46 I. C. C., page 236—the authority for fourth section relief was withdrawn, both as to eastbound rates and as to westbound rates, with the exception of wool. The wool fourth section authority was withdrawn in July, 1924, in 91 I. C. C. 236.

I recall when the Oregon Eastern was first talked of, and I happened to be in a position at that time in the Oregon Railway &

Navigation Company's offices where I had opportunity (4022) to know in a general way reports and recommendations to my superiors, and I think it was in 1905, or 1904, probably, when they first commenced to talk about a cross-State line. Now, it wasn't within the foresight of anyone at that time that the carriers would ever be denied the right to meet water competition. At that time they were handling a large amount of tonnage east and west bound in competition with water lines. In addition, they had a large amount of tonnage of import and export traffic, originating in the Middle West, going to the Orient, cotton from the South, with Oriental products moving through the Pacific coast going to the East. They did not, and could not, imagine that all the traffic east of Chicago, for instance, at the present time, would move via the Atlantic seaboard or via the Gulf, they could not imagine or foresee the operation of the Government barge line on the Mississippi River, but to the contrary, Mr. Harriman and the officers figured at that
2229½ time that the Pacific coast was going to develop, and that there would come large tonnage, predicted upon that which they had been handling, east and west bound. I do not criticize, but undoubtedly Mr. Harriman and the other officers, as I recall it, at that time had those things in mind. The Milwaukee must have had that in mind when they decided to extend west; likewise when the Western Pacific was first thought of, in 1909 when it was completed. (4023.) Mr. Harriman, as I recall the plans of those days, correspondence that I have seen, reports that I have handled—and in one case I received all the confidential reports sent in by field men in connection with one of these projected lines, and from them I built the so-called estimated earnings return. Someone else figured, however, the revenue on that. Now, it was Mr. Harriman's intention in welding together the Harriman system to develop branch lines in Oregon, he was going to Puget Sound, and he figured that with the Puget Sound tonnage, with the tonnage to be produced around Portland and in the immediate vicinity of Portland, that the Columbia River route of the O. R. & N. would have sufficient business to be operated to its maximum, therefore, that the line which he intended to drive originally from Drain west to Coos Bay before they had a harbor to amount to anything, that the tonnage for the cross-State line, so-called, would be produced in northern California and western Oregon and relieve the Columbia River line, it being well known that that line could not be double-tracked except at a very heavy expense.

Now, at the time the Southern Pacific and the Union Pacific con-
solidated under the Harriman regime in 1901 one of the first
2230 acts was to readjust the rate situation. All rates to and from Oregon were cancelled within a period of two years so far as they applied via Roseville and Ogden, and the business forced to move via Portland and the Union Pacific. There were (4024) no rates at that time via Portland in connection with the Northern lines, with the exception of a few class commodity rates with the

Northern Pacific. In other words, all of the traffic produced in western Oregon, or expected to be produced, in the territory served by the Southern Pacific, was to be controlled absolutely to the Union Pacific route through Portland or other lines that might be required to handle it. At that time the O. R. & N. Company operated a steamer line between San Francisco and Portland in competition with the Southern Pacific. We used the steamer line to feed the route through Portland, all together adding to the tonnage that would support the lines. Now the situation has entirely changed. Business outside of lumber, as very clearly shown, in my Exhibit 114, the business of all character moving eastbound other than lumber is a very small amount, and consists principally of agricultural products, westbound it is very small. That is to say, all this tonnage of canned goods, dried fruit, wool, hops, and other traffic of western Oregon that in those days moved by rail and moved over one route has been taken away from the carriers.

Locally here in Portland the production is all north of Eugene—that is, so far as quantity is concerned. In fact, north of Albany is the chief production. The Oregon lines of the Southern Pacific lost this traffic eastbound, they make low rates into Portland,
2231 they haul some (4025) in by trucks—paper from Salem and other commodities. You will find the last item that we could rely on, and which was the big item in those days, a large item today, is being influenced by tidewater, and that is lumber. We had every reason prior to 1915 to expect that business to the east by rail and west by rail would be on the increase, but seeing it slip away it makes it all the more important—in fact, all the more necessary—that the Southern Pacific take the same action that other lines are doing, that is, to hold to their rails every ounce of long-haul tonnage they can secure, and that we propose to do.

There is another item for serious consideration by the Southern Pacific, and I mention it simply because it is an element to show the reasons why the carriers were obliged to seriously consider some of these matters: There is pending before the Interstate Commerce Commission on rehearing application for permission to meet water competition between Portland and San Francisco, Oregon points and California. A decision was rendered something over a year ago providing that the rates between San Francisco and Portland should not be less—the rates by rail should not be less than nine cents per 100 pounds higher than the boat rates, and that the rates to and from interior points should be based on the local rates to and from the ports, with a maximum rate of 100 per cent to high point—or interior high point. The effect of this will be to turn over to short-haul at Portland and at San Francisco (4026) Bay considerable tonnage that the Southern Pacific now handles up and down be-
2232 tween here and California by rail, because the differential of nine cents is so wide that there will be no opportunity whatever for the Southern Pacific to meet boat competition. Earnings

necessarily will be reduced from that source, leaving for support of the parent line and support of our Oregon lines a lessened avenue for revenue return.

The Southern Pacific didn't have the competition of the Oregon Electric in those earlier days, didn't have the competition of the trucks, or the United Railways or other subsidiaries of the Spokane, Portland & Seattle Railway.

When I saw those reports and correspondence I was in charge of files for Mr. Ben Campbell, Mr. R. B. Miller, Mr. James G. Woodworth (4027), at Portland, Oregon, in the office at the corner of Third and Oak Streets, in the Worcester Building. I went to work first for the O. R. & N. Company in 1889. I was quite a young boy. These files came along in 1904, '05, '06, and '07. I had special interest in the matter at that time. I was learning. I don't believe I would have been given the opportunity to handle some of these things except that I was ambitious, night and day work didn't make very much difference to me, and thereby I got the opportunity.

Cross-examination:

As to Exhibit 109. The principal shipping points that are shown for those different counties on pages 2, 3, 4, and 5 of the exhibit, are (4028) the points of origin in the various counties that form the basis for the distances shown in all my exhibits that have to deal with distance. Those are the points we name. As to what considerations lead to the choosing of those particular points in the various counties, as I stated when I explained the exhibits, we took the
2233 principal shipping points, that is, the points in each county that were representative of the largest tonnage producing stations. I didn't confine it to lumber. Confined it to dried fruit, canned goods.

Exhibit 114: Sheet 8 is simply a recapitulation of sheets 2 to 7, inclusive.

Q. Exhibit 118, on sheet 2, for 1927 the shipments of fir lumber from Oregon by rail amount to just short of two billion feet. I have calculated that at the rate of 25,000 feet to the car, which would make almost exactly 80,000 cars. Could you say approximately how many of those 80,000 cars the Southern Pacific originated, of fir lumber? (4029.)

A. As I recall it, our loading of 1927 was 50,000 and a fraction. That covered local movements, export, re-manufacturing.

The coast group lumber rates applies blanket from the British Columbia line to the Oregon-California line, from all main line and branch line points on all of the major carriers west of the Cascades, in both Oregon aand Washington. That includes, also, a number of short line common carriers on which the common point rate has been extended to apply.

After the Union Pacific-Southern Pacific merger was dissolved, the joint rates were re-established via Roseville and Ogden. We re-established the rates on lumber (4030) almost immediately after

the dissolving of the merger, and opened up the rates to the Denver & Rio Grande, and then a little later we put in all class and commodity rates, east and west bound. We didn't cancel any rates via Portland, either east or west bound.

2234 Q. You mentioned your inability to induce the building of lumber mills in the interior for the manufacture of lumber at points served by the Southern Pacific, didn't you?

A. I didn't mention only the Southern Pacific. I referred to all roads. The same situation, I may explain, exists right today in connection with the extension of the Oregon Electric east of Albany into the Santiam territory; it is going to be a log-haul proposition to Portland, with small portable mills, or small mills, cutting 40 or 50 or 60 or 70 or 80,000 feet of timber to cut so-called second-grade, but milling to cut 2 billion feet of timber requires a mill of considerable magnitude, and that costs money.

Q. But the reason as I understood you gave for the inability of the Southern Pacific and other railroads serving timbered (4031) areas in the interior to induce the construction and operation of good sized or large sawmills at interior points was that the persons interested in the cutting of that timber insisted on making their investments in mills that would be located on tidewater?

A. Yes, sir.

Q. What is the advantage from a transportation standpoint of having a mill located on tidewater?

A. Well, Mr. McCulloch, in answering your question, I stated "interested in mills." Now, in some cases the people who own timber don't desire to go into a milling operation; they desire to sell the timber in the log. In other cases, with Portland mills, their log supply diminishes, and there are several of them here have gone south of Portland and purchased large bodies of timber, and that will all be cut here; that is, timber that we expect

2235 sometime to be on the rails will be brought out here in the log. Then there is, of course, some—and in the case I mentioned, the parties are willing—or were willing a year and a half ago—to consider the building of a mill, but they tell me very frankly that finance will not permit that, to build a sawmill with a production already over and above the consuming market, but they must dispose of their logs, and a mill on tidewater, if he can buy logs in the open market, will defer cutting their own timber, conserve their own timber for the future, and buy in (4032) the open markets; he knows if those logs can be brought into Portland or into Coos Bay mills owning their own timber would buy the logs and defer cutting their own timber nearby to Portland, because it is constantly growing in value. That is the reason why mills are not going to go into the interior—both of those conditions. (4033.)

The advantage to the lumber mill from the transportation standpoint in being located on tidewater is, first of all, he has the advantage of water transportation to all points of the compass, foreign.

intercoastal, the Orient. In addition, he has the opportunity for good local market to sell his slab wood, to sell his sawdust, and he has a good labor condition. He does not have to provide housing for his employes, or anything of that kind.

Q. Isn't there another reason also? Is there any point in Oregon or Washington, that you know of, on tidewater, where large lumber mills are located now, that does not have the advantage of railroad transportation furnished by two or more competing railroads?

2236 A. No; I think that is true. There are mills, however, on one line of railroad.

Q. But the great concentration of lumber production in Oregon and Washington is at points where there are the advantages not only of water transportation but also of rail transportation by two or more lines of railroad; isn't that correct now?

A. No, sir.

Q. Keeping in mind Puget Sound, Grays Harbor, and the Columbia River?

A. No; I can't subscribe to that, Mr. McCulloch, in whole. I will admit there are mills served by two or more lines of (4034) railroad, but I have heard a great deal of this question of mills on two lines of railroad. We have heard a whole lot said about the Weyerhaeuser people building a mill at Klamath Falls so they would have two lines of railroads or they would not build it. Now the Weyerhaeuser mill is not located on the Southern Pacific at Klamath Falls, and they are probably not going to have the service of the Southern Pacific at Klamath Falls, because they have so located their mill it makes it difficult for the Southern Pacific to serve them; yet the theory was they would be on two lines of railroad. Now Mr. Woodard had an opportunity at Silverton to have two lines of railroad. He didn't take any advantage of it. And my experience is, Mr. McCulloch, and I am dealing with timber propositions all the time down on the Southern Pacific, it is not a question of two railroads; it is a question of mill sites in many respects in the interior, and other conditions. But tidewater has the advantage, as I stated a while ago, and that is why tidewater gets the mills.

Willapa Harbor only has one line of railroad, in many
2237 respects, the mills there, and has not had for years. That is in Washington.

Mr. DEY. Mr. McCulloch's question, though, Mr. Mulchay, was Oregon and Washington; whether any large mills on the harbors of those two States are served by one line of railroad. (4035) How about Coos Bay, Tillamook and Yaquina?

A. Well, Coos Bay has two large mills. The Hammond Lumber Company, whose mill burned down at Astoria, they are operating, have a large operation at Garibaldi. Mr. C. D. Johnson built a large mill at Toledo locally on the Southern Pacific, one line of railroad, completed and started operation in 1923. The Umpqua Mills & Timber Company built a large mill, operates at Reedsport on the

Southern Pacific. They ship some by water, and they ship some by rail, but there was only one line of railroad.

Q. (By Mr. McCulloch.) I had mentioned in my question, Mr. Mulchay, the concentration of large sawmill production. It was not referring particularly to individual operations of fairly large size. But take the mill at Marshfield, isn't it a fact that that mill has two means of transportation to the eastern markets of the United States, and, generally speaking, to the world, one rail and one water?

A. Mr. McCulloch, that is true, but——

Q. Isn't it true of Mr. Johnson's mill, that the Pacific Spruce Corporation——

A. Has tidewater.

Q. Yes; and rail also, hasn't it?

A. Yes; but it is a single line of railroad.

Q. All right. And the mills now at Astoria, or formerly at Astoria, had both a rail outlet and a water outlet, didn't (4036) they?

A. Yes; that is right.

2238 Q. Whereas, as compared with those operations and the sawmills at Portland and Tacoma and Seattle and Grays Harbor and Willapa Harbor, your mills in the Willamette Valley and western Oregon have only one outlet, and that is by rail?

A. No—that is true, one outlet, but they have also, in the case of two large mills, outlet by rail, two rail lines, the mill at Salem and the mill at Albany. We make them low export rates into Portland. We handled some 5,000 cars last year over our east Portland dock to enable them to ship by water. Our rates on logs to the interior mill are less than they are to the tidewater mill. There are advantages, even though they are located on one line of railroad; in other words, every encouragement. But it is not the one line of railroad that locates these mills. I would like to answer your question, if I could understand what you want, Mr. McCulloch. I can say yes that the lumber mills that have one or two lines of railroad, in addition to tidewater, as market outlets, are much more advantageously situated than an interior Willamette Valley lumber mill, from the fact, they have the (4037) advantage of water, as I stated a while ago. If they have two lines of railroad it must be some advantage, of course.

Additional channels of transportation for any manufacturing operation, other things being equal, are of material benefit, as compared with a competing manufacturer who has less in the way of facilities of transportation to get his products to the market. But in the case of the Willamette Valley, I would like to say this: It is true that a mill only has one line of railroad; that is the Southern Pacific; but it really has four lines of railroad. It has the same rates via Portland in connection with the S. P. & S., and the Northern Pacific; via Portland, the S. P. & S. and the Great Northern; via
2239 Portland and the Union Pacific; via the Southern Pacific direct lines. Hence, while in the sense that there is only one set

of rails to that mill, it reaches all points of the compass just the same as if there were four lines of railroad built to it. It is not true that if the cross-State line were built and in operation, in that sense, the Willamette Valley would have five lines of railroad.

Q. You mentioned the competitive rail service that celery growers at Brooks and Quinaby have. In your judgment is (4038) that of benefit to those celery growers, or not, that opportunity that they have of using the shipping facilities either of the Southern Pacific or Oregon Electric?

A. Why, Mr. McCulloch, there is no competition about it. The celery that is grown adjacent to the Southern Pacific tracks moves out via Brooks; that which is adjacent to the Oregon Electric tracks at Quinaby moves out through Quinaby over the Oregon Electric. Now the reason why it started on the Oregon Electric at Quinaby was because that was the first end of the lake that was really reclaimed by these Japanese, but now as the acreage has increased and swung around it comes about the majority of it is on the Southern Pacific's side and goes into Brooks. There is none hauled from Quinaby, although it could be hauled from Quinaby, over to Brooks, if they wanted to do it. There are growers located all the way in between Quinaby and Brooks. But it is sold through dealers; what I mean is, an agency; and that agency dictates to the grower where he wants the celery hauled. Now if he is operating at Brooks, the celery is hauled, that is tributary to Brooks, to the Salem side—to the Brooks side. If it is tributary to the Quinaby side, he orders the growers to haul it to Quinaby, and it is packed there.
2240 That is the way it is handled. (4039.)

I mentioned broccoli. Both grades, number ones and number twos, fluctuate in prices up and down during a particular day, depending altogether on the condition. I showed different prices for the fancy grade and for the fair grade.

Q. But I was wondering if you meant that in any single day the prices on the fancy grade would fluctuate up and down?

A. Oh, no. Those are what are called opening prices in the morning, as I understand it. That is, the price at which the market opens, reported price, or basis of sales of that particular date.

Q. Now, it is these prices that you say will fluctuate up and down during the course of the day, these opening prices?

A. No; they fluctuate up and down every day. I don't say that during the day the opening price will fluctuate. It is my understanding that the opening price in the morning is the price that is maintained for that particular (4040) grade during that day. My understanding is that these are the average prices that are received by the dealers for broccoli on that particular date at Chicago, on the Chicago market. I do not know whether they may fluctuate up and down during the day for a particular period.

Q. All right. Now I understood you to say in connection with these shipments of broccoli, that the present efficient service of the

Southern Pacific via Roseville could not be split up so it would be as good if over two routes as it is over your Roseville-Ogden route now?

A. No; I don't say that over two routes. What I meant to convey was this, Mr. McCulloch: This product moves over a period of
2241 about 60 days, and there is 300 to 350 cars in the average year, the last three or four years. Taking that over a period of 60 days, you haven't a great many cars per day to move. If there is 10 cars shipped today, 6 of those are ordered south via Roseville and 4 via Portland, we have got to split our service both southbound and northbound. Now we would prefer to take and consolidate the 10 cars and put them into what we call a block, adding out a few more cars of dead freight, or something of the kind, and run them into Portland rather than take them as a split proposition to Roseville. (4041.) From the standpoint of carrier convenience, instead of sending part of them via Roseville and part via Portland, instead of splitting them that way, we would rather send them all via Portland, because we can give better service. It is not a question of efficiency. I didn't mean by what I said to suggest that the Southern Pacific service via Roseville on broccoli would deteriorate in any way if the cross-State line were built and were competing for that business. The Roseville route is there, and it is going to be there, and it is going to give service.

The Southern Pacific handles canned goods from western Oregon east through Roseville and Ogden.

Q. Are those shipments nearer to Portland than—on an average weighted mileage basis, so that it would make a shorter route to the East than they are to the Roseville gateway?

A. No. In making my weighted average I did not use any cars originating in Multnomah County; and the fact is, Mr. McCulloch, we do handle canned goods from all western Oregon. We handle them out of Portland via Ogden. (4042.) We handle all our canned goods traffic in western Oregon via Portland and east that we can get, the majority we handle goes via Ogden; but we bring some via Portland that is routed this way. But I wanted
2242 to make to you clear in answer to what I thought you intended; that was, do we handle any business via Ogden that originates here in Portland? Now the fact of the matter is, we actually handle business out of the canneries at Portland via Ogden. In fact, we had a car only yesterday, Mr. McCulloch. If the cross-State line were built and in operation our canned goods tonnage of western Oregon would be closer, on an average weighted mileage basis, to Portland than to Crescent Lake. Our canned goods tonnage going east from western Oregon, on an average weighted mileage basis, would be nearer to Crescent Lake than to Roseville. The same rates east apply via Portland as via Roseville on canned goods. (4043.) The rates on canned goods are the same via Portland and the Union Pacific, the Northern Pacific, and Great Northern, as are in effect via Roseville. I am sorry to say it, though that is the fact.

I think the building and operation of the Altural line of benefit to the producers and shippers of western Oregon. I hope that we will make some faster time over the line than we do via Roseville. I expect this: We will have a little shorter time. I don't know how it will improve the service very much over Roseville, but we will have a little shorter time. It will give us an opportunity to increase our business to and from Portland where there is a natural aversion to routing via Roseville. Now we haul into this city, some 30,000 cars of logs a year——

Q. Remember, Mr. Mulchay, I don't want to interrupt you but I (4044) was asking the question to get your judgment of the benefits from the producers' and shippers' standpoint in western Oregon, of the construction and operation of the Alturas line.

A. Well, of course I was talking from the point of justification. Why, yes. I can't conceive of any shortened mileage
2243 not doing somebody some good.

Q. Any additional railroad route or outlet to markets that provides a new route where there was not one before, and with that new route providing saving in time and material saving in distance, in your judgment could not help but be of benefit to the producers and shippers of western Oregon; isn't that correct?

A. Well, that depends on conditions, Mr. McCulloch; it depends entirely on conditions. Because time in many cases makes no difference to the shippers or consignees. Otherwise we could not possibly make the showing that we do with respect to taking business out of western Oregon through Roseville.

As to whether there are any reasons which I have assigned as benefits to be derived from the Alturas line that will not likewise apply to the cross-State line, I don't know anything about the cross-State line. (4045.)

Q. I understood you to testify that Portland was the natural outlet and natural gateway for western Oregon fruit shipments, or Willamette Valley fruit shipments?

A. Yes, sir. As to why it is the natural gateway, I thought I explained that in my direct testimony. Because much of this Willamette Valley traffic is handled by dealers here in Portland. It is moved through here for diversion purposes, and others. Now we handle apples out of the Willamette Valley via Ogden, but the majority of them come via Portland. We wouldn't have dealers at Eugene if we had a cross-State line. Willamette Valley apples go to Texas; they go some to the Middle West, but it is mostly the Southern States that the Williamette apple goes to.

There is an advantage to western Oregon fruit shippers in having their fruits handled via Roseville during the heavy shipping season of perishables, when we are handling 700 or 800 cars a day
2244 through Roseville, because, as I stated a while ago, we handled some 50 odd cars of celery last year via Roseville; through Roseville. (4046.) I have never seen the Roseville gate-

way congested by reason of the large amount of perishables that we handle there during certain months of the year. Some of the biggest and most magnificent yards in the United States are there. It is among some of the largest and most magnificent railroad yards in the United States.

I think it is an advantage to Oregon for perishable traffic to be thrown in with the heavy California tonnage, perishable tonnage, which moves in very large volume and in lots of 700 or 800 cars a day. It is like a passenger train; it goes along, and it is broken up, and there are cars put into it here and there to get better service than it would if all those trains were split up. Now Oregon is benefited, where she has got four or five cars a day, to have those cars put into a solid block of perishables that runs just like a passenger train, is never broken up until it gets to its (4047) destination. No matter how many cars of perishables we may be handling through the Roseville gateway the traffic does not slow down; the year around we have those trains through Roseville. We handled over 18,000 trains in the year of 1926 eastbound of perishables through Roseville, and I believe there was only five of those trains that were late. Now 18,000 trains of perishables is something that you would not have out of Portland, Oregon. There have been no complaints that I know of about delay in handling our celery shipments from the Lake Labish section. We aim to give these perishables the finest kind of handling. To my knowledge there was never a car that we were asked to hold up and run slow; we never had a request of that kind, and I am pretty certain I would know. (4048.)

2245 I stated we expected to increase our business from western Oregon to eastern destinations by shortening our route through the Alturas line. As to whether we will take that business away from the Union Pacific or other lines, or whether that will be new business, I am going to do my best to take some of it away from the other lines. And I think we can get some of it by reducing our mileage 200 miles; at least I am going to try.

Q. Do you know of any reason why the Union Pacific could not get some of yours by reducing its mileage or reducing the mileage from western Oregon 400 miles?

A. Yes. They would have to get it.

Q. You don't think they would get very much of it under the present method of solicitation in western Oregon, do you?

A. What do you call "present method of solicitation"?

Q. The way they are soliciting. You know how they are soliciting now.

A. Now, how is it? If you know you can perhaps tell me something I don't know.

Q. I don't pretend to know how they are doing it, Mr. Mulchay.

A. Well, I know that they are a pretty aggressive lot, and if you sat at my desk for thirty days you would find it out. (4049.)

Q. How do you account for the fact, Mr. Mulchay, that out of the various lumbermen who have testified on the stand here in this case, there have been only one that I recall that remembers ever having been solicited for lumber shipments via the O.-W. through the Portland gateway?

A. I believe he said that an officer of the company had not solicited him. He did not refer to the soliciting staff; and I kidded Mr. Huggins about that to-day. Now, Mr. Huggins has a traffic manager who handles all of his business, like most all of these mills, and the solicitor gets to the traffic manager for the business.

2246 Q. And you think Mr. Huggins didn't know what he was talking about at all?

A. No; I don't believe Mr. Huggins knows exactly what he is talking about when he said——

Exam. ROGERS. There was more than one of them said that, that the O.-W. had been around.

Mr. DEY. Yes. Mr. Woodard said today that he was solicited.

Mr. MCCULLOCH. He said he didn't know.

Mr. DEY. McLeod said he was solicited.

I know something about the bulb industry down in southern Oregon. I know it is there and that it is developing. (4050.) It is just a new industry that started in the last year or so and I have had some interesting correspondence with the Department of Agriculture at Washington trying to help them. I expect some rather substantial shipments from that source during this coming season, but not to the extent of 40 cars per annum. That stuff is going to move largely in small quantities, by parcel post and by small express.

Q. Ten years ago wouldn't you have said that a man was a very extreme optimist if he had told you how many cars of celery you would be moving out of the Labish meadows?

A. No, sir. Nobody can tell me anything about what we can do down in this valley, because I am just about as optimistic as they can be. We were not shipping any such quantity of celery ten years ago as we are now. And it was not until the Japanese difficulties in California that we commenced to get the celery up here, the growth of it. That is what brought the Japanese in here, who grow it. I can say how much our celery shipments have increased from that section in the last few years: The first year that we commenced to handle any celery we (4051) handled 35 cars. That was in

2247 1925; 6 cars east via Ogden, 7 cars east via Portland. In 1926,244 cars, 12 east via Ogden, 172 via Portland. And 1927, 393 cars, 51 via Ogden, 232 via Portland.

We do not really have any substantial movement of logs by rail over our main lines; we keep the logs off of our main lines. Our regulations will not permit the hauling of logs on main lines at all unless in gondola cars; we have enough wrecks on the other lines without tying up the main line with a wreck. Logs can be shipped into Portland over our west side lines into Oswego and Menefee.

That is where the log dumps are. They do not necessarily have to be in gondola cars there. We do not have any log rates that will permit shipments of logs for distances of 100 or 150 miles, but they want us to make them. As a matter of fact, there have been many attempts to get us to make logging rates to permit that, but we have consistently refused. (4052.) We are going to resist it as long as we can, but how long that will be is a question.

I stated that the broccoli growers at Roseburg were very much discouraged, but it is not a fact that this discouragement is due to their inability to get their broccoli into eastern markets in a condition which can permit is to compete with California production.

Q. Don't you know, Mr. Mulchay, that they have used every means of preserving their product that is possible to use, in order to get it there in a condition comparable with the California product, and that unless that situation proves successful they are going out of the business entirely?

A. Well, no. Those are not the reasons at all. Now I know the Department of Agriculture has made some very extensive studies of this movement of broccoli, and we have helped them a great
2248 deal. Now I was reading some quotations from the Bureau of Markets. I would like to read one more.

Q. Well, have you something in addition to the prices that you read before in your testimony?

A. On March 17th, Saturday, central California, southern California, $1.90 to $2.00 for fancy; $1.50 to $1.75 fair. Oregon, $1.75 to $1.85 fancy.

Now you wonder why that differential. Trade prejudice (4053) against Oregon broccoli crate, and 10 per cent discount made on this account.

Q. A crate prejudice against Oregon broccoli, you say, is all?

A. New style crate. Now this year they adopted a new crate in the Umpqua Valley, which had a material effect on their prices.

As to whether I have any information as to what percentage of the broccoli from Roseburg was rated as first grade and what percentage was rated as fair when it arrived at the Chicago market, my understanding is that the majority of the crop was number twos on account of the hot weather. I can not agree that it was the length of time in reaching the destination. By hot weather I mean that just before harvest there came a warm spell and it ripened the heads quickly, ripened too quickly. I don't know whether California broccoli experiences that same difficulty or not; they may at some of the times, but I don't think so. It lies along the coast in California; right along the coast. (4054.) As to how long it takes to get the Roseburg broccoli to Chicago as compared with the California product, we brought the broccoli from Roseburg to Portland this season and last season in 13 to 18 hours. It was in Portland until along about 5 or 6 o'clock at night, depending on what time we could get out of Roseburg with the train.

Comr. McMANAMY. Could you give me the time from the time of leaving Roseburg until leaving Portland?

2249 A. Yes. Now here is the Chicago schedule, 99 cars the schedule being 203 hours, we made less than schedule on each car; just how much I don't know. Council Bluffs schedule, 176 hours, 7 cars less than schedule, 1 car over schedule. Denver, 9 cars less than schedule of 152 hours, 3 cars late. To Minneapolis, 178 hours, 2 cars less than schedule. Omaha, 176 hours, 24 cars less than schedule, 2 cars late. Portland, 89 cars out of 175, thirteen to 15 hours, balance 17 to 18 hours. Seattle schedule, 32½ hours, 20 cars less than schedule. Vancouver, B. C., schedule 58½ hours, 2 cars less (4055) than schedule. I am talking about broccoli now altogether, that is the schedule from Roseburg. I haven't got here the schedules from the California producing sections to the same destinations but you can figure 154 hours from Roseburg and whatever the time would be from the Colma district, which is the principal growing district, which is down in Half Moon Bay, south of San Francisco. That is about 118 miles on a direct line to Roseburg. Adding the Dumbarton movement will probably add 20 miles to that. As to how many hours that would be, that ought to be at least 10 or 12 hours. That is putting it at a minimum because there is a lot of broken service. I would not care to state just exactly what the time is. I haven't checked it up. There is some secondary or branch line service. I do not have here the records showing the leaving time at Roseburg and the leaving time at Portland. (4056.)

Mr. LOUNSBURY. The leaving time at Portland is ten p. m.

Exam. ROGERS. What time did it arrive here?

A. Well, we arrived here all the way from 1.30 p. m., 1.00 p. m., 11.30 a. m., 5.30 a. m.—all kinds of hours. You see, there was only

2250 175 cars went east this year, so the loading on any day was such that you could not give a block movement. This is just this year's figures, this year's time.

Exam. ROGERS. Well, is there one train that takes this broccoli out of Portland?

Mr. LOUNSBURY. No. We have another train that leaves at six o'clock. We could take it if it was here for that train.

And from Reiff it is 151 hours. (4057.)

Comr. McMANAMY. Have you received any complaints concerning the condition of Broccoli upon arriving on the Chicago or eastern markets, based on time in transit?

A. Why, yes. I haven't heard of any complaints recently.

Comr. McMANAMY. Have you paid any claims on that account?

A. No; I don't know as to that. I don't believe we have. But some few years ago there was complaint of the leaves turning yellow on arriving on the Chicago market. I think, however, the trouble was due to the fact we were not using top icing. Myself, I think since we have commenced to use top icing in the last two or three years that has disappeared.

Comr. McMANAMY. The carrier does not top ice in any event?

A. No, no. The shipper does, but the carrier does, I think, permit the loading of 9,400 pounds of ice in the car on top of the load, without charge.

Q. (By Mr. ELLIS). Do you know why the broccoli shippers at Roseburg have recently adopted the practice of shipping their broccoli in oiled paper, or sealed oiled paper bags?

A. I heard they were doing that, but I understand it is to make a nicer looking head for the public to see—sales proposition.

Q. You would be surprised to learn that that was a part of the protective feature that they are adopting to overcome their (4058) difference in time in reaching the market, would you?

2251 A. Yes; I would be very much surprised. I don't know anything about it myself, but I would like to know of that fact first.

Q. I have just about one more question. You, I understand, have stated that the only way that any lumber would move via the cross-State line would be through withdrawing and canceling the joint rates through all other gateways?

A. Yes, sir.

Q. I am wondering if you would say also that that is the only thing that will move any lumber over the Alturas line?

A. No, sir. First of all, I would like to say this to you, Mr. Ellis: Throughout this you are presupposing that the Southern Pacific can control this business. Now we can't control this business any more than you can control it; and the only way you can control it is to adopt the same policy that Mr. Harriman adopted in 1901, and that is confine all your rates to one gateway and force the shippers to ship over that gateway. That is the only way you are going to do it.

We certainly did have to close the Ogden gateway to get shippers to ship through the Portland gateway and the northern lines. We did not have any rates with the northern lines in those days. It is true we now have rates through Ogden and Roseburg; we put them back. In spite of that fact it is true lumber is moving through the Portland (4059) gateway, to some extent, to the northern lines. There is some moving to the Union Pacific, but we are soliciting and securing every pound of lumber that we possibly can for our long haul.

Q. Well, then, you didn't mean that just exactly the way you stated it, did you, that you would have to withdraw all of your rates on lumber through all other gateways before any lumber would move over the cross-State line?

2252 A. Well, of course if there was through rates in effect via the cross-State line, and the shipper routed the lumber over the cross-State line, it would have to move that way. But we haven't got any through rates yet via the cross-State line, and I doubt that we would have them. Assuming we had them, if a shipper routed

any business via the cross-State line of course we would have to obey his instructions.

Redirect examination:

I have been asked several questions about the usefulness of the Altural line to the people in western Oregon as compared with the usefulness of the shorter proposed cross-State line. I do not think it makes any difference because it is the Southern (4060) Pacific Company that is building the Alturas line and it is the Southern Pacific Company that is serving these shippers in western Oregon.

Q. Well, you think, then, the Union Pacific has just as good a chance to solicit business in western Oregon as the Southern Pacific has?

A. No, sir; I do not think they have the same chance.

Q. Well, don't you think, or do you think, that the ownership of the Alturas line by the Southern Pacific Company as distinguished from the Union Pacific ownership of the cross-State line, is not a factor in controlling the route over which this business is going to move in the future?

A. Yes, sir; no question about that.

Q. Well, then, is there, or is there not, a distinction between the usefulness of the cross-State line and the usefulness of the Alturas line to shippers located in western Oregon?

A. Well, there is no question about the usefulness of the Alturas line to the shippers in western Oregon located on the
2253 Southern Pacific lines. It is a benefit to them.

Q. Yes; and would the cross-State line be of just as much usefulness to them, or more?

A. It would not. It would not be of as much usefulness to them. (4061.)

(Witness excused.)

Comr. McMANAMY. Does this conclude your evidence?

Mr. DEY. Now that is the case for the carriers, except in the morning I may ask to hand in a small exhibit showing the proportion of Federal ownership and private ownership in the various counties that we have talked about; just a short statement in printed form.

Exam. ROGERS. Timber?

Mr. DEY. All land, all acreage, to show how much of the acreage of the State and of each of these counties is in Federal ownership.

Comr. McMANAMY. That may be done.

Mr. DEY. But there will be nothing else that I can think of. (4062.)

2254 PORTLAND, OREGON, *August 25, 1928.*

Mr. ELLIS. Were you through, Mr. Dey? You made one reservation last night.

Mr. DEY. Yes; all except one exhibit, and I will introduce that later. It will come up during the forenoon.

Comr. McMANAMY. Proceed, Mr. Ellis.

FOSTER BUTNER was thereupon produced as a witness on behalf of complainants, and, having first been duly sworn, testified as follows:

Direct examination:

I reside at Roseburg, Oregon. I have lived there 18 years. I am engaged in farming to some extent, but my main business is the shipping of broccoli. I am the manager of the exchange, Umpqua Broccoli Exchange. That is an organization of farmers for the sale and (4063) distribution of the broccoli. I couldn't tell you exactly how many members that exchange has. I would say offhand 200 or 300. It changes every season. I have been manager of that exchange six years, I think. That does not cover the entire period that I have been shipping broccoli from Roseburg. I shipped as an individual, independent shipping prior to that time. As to what previous experience, if any, I have had in the handling of perishable products, that is all I have ever done since I was about 12 or 15 years old, except a little schooling in Kentucky and Tennessee and other States. The nature of the work I carry on is buying, selling, packing, and shipping fruits and vegetables. That has covered a period of about 30 years, offhand. I am familiar in a way with the shipping and marketing of perishable products generally throughout the United States. I don't feel that I know it all. (4064.) I learn a
2255 little something every day, and I keep my eyes open, do the best I can.

As to the condition of the broccoli industry in the Umpqua Valley, its development and its problems: Well, the deal originated around 1914 or '15, I think, and after a few experiments, why, it has gradually grown into a large industry. I think their largest season was 1926, with approximately 1,000 carloads. We are by no means utilizing at the present time all the land in the Umpqua Valley that is suitable for the growing of broccoli. There has been a very gradual and very steady increase in the acreage planted to that commodity up until 1926, the large year; since then it hasn't been quite so heavy. I couldn't tell you exactly how many cars were shipped by our association this last season, but it was around 125, about half—we handle about half of the crop from the Umpqua Valley, which I think was 250. That was not a representative season so far as the proportion of the crop that we handle. (4065.) We handle less than previously. The deal has come more and more cut up this last season, more dealers cut into it. We sell our product I think in about 50 cities in the United States and Canada. I think the principal markets are New York, Chicago, Minneapolis, and St. Paul. Philadelphia is a pretty good market. The competition for the sale of broccoli is very keen in those principal markets. We come in competition with several markets in California. California is our only State as a competitor, but that means a lot—Santa Maria and Guadalupe, and around the bay district of San Francisco, all heavy shippers at the same time we are shipping. As to what
2256 gateways or routes of transportation those shipments of Cali-

fornia follow, they use the Santa Fe and Southern Pacific, I think. I don't know the exact routes. Ogden and Omaha, I presume, though. (4066.) As to what has been my experience in the principal eastern markets in competing with those producing districts, we found that they had the advantage of us in time getting to market. In the beginning, I would say they had an advantage of three or four days. We cut off a little of that by changing by the way of Portland instead of Roseville. (4067.)

We routed our shipments through Portland instead of Roseville to save time—the important factor in this business. Our product—of course, I presume the audience understands it is nothing more than cauliflower—it is called broccoli, but it is just a variety of cauliflower, a hardy variety, and the market value depends entirely on the condition of the product on arrival at market, and we have noticed it on any given day during the real movement that there will be prices ranging from $1.00 a crate or even less to $2.50 a crate at New York and Chicago, and that difference is by reason of quality and condition, and usually condition. I would say that there would be a greater variation in quality on the same day than in the market price from day to day. As to what extent is the variation in price as caused by quality affected or governed by time in transit, our experience is that if a car is a little late, it is always more or less yellowed, and yellow means a stale look to it. No matter how fine the head may be, if the leaves (4068) are discolored the product is discredited and sold for less price.

Exam. ROGERS. What is the difference in No. 1 and No. 2?

A. Well, the difference in the quality of the head there. The head that would be perfect and solid and white today and isn't cut today and should go until tomorrow will go to make a
2257 tinge of yellow, or the segments are spread, likely. We have no difficulty in marketing the broccoli on account of the packing.

Exam. ROGERS. What I mean, one fellow's package as against another's?

A. We have made some changes in the package, but the conditions of the crop itself has been the only problem.

I think in the last two years it takes about nine or 10 days to get a car of broccoli from Roseburg to Chicago. Prior to that it was a little greater. There has been a slight improvement, I think, in time. That is through the Portland gateway. I think we are getting now nine and 10; used to be 12 and 13. That is to Chicago. (4069) We were always longer that way. That is the reason we changed to Portland, because we not only get a quicker time, but we feel that the climatic conditions would be cooler, and also aid in the conditions.

I have information as to the condition of our broccoli upon arrival at the Chicago or New York markets, as compared with the condition of broccoli received from California. I have that, of course, mostly

through our connections and dealers, but in a few instances I have been on the market, I have observed myself. As a rule that product shows fresher and greener than ours, although we have a finer quality of head. Given the same time, we would beat them—time in transit, I mean. As to whether that condition on arrival at market had anything to do with the amount of broccoli we have grown and shipped, I would say this, that the better price growers can get, why, naturally the more they are inclined to grow, and the better condition we get at the market, why, the more the broccoli would bring and the more we are able to sell it for. We sell it f. o. b.—we don't confine it—but, of course, (4070) our prices are based on market conditions.

2258 In my opinion the construction of the cross-State line from a connection with the Natron cut-off near Crescent over to Crane would be of assistance to the broccoli growers of the Umpqua Valley, and that is the general opinion in our community. I think so much of it that I am spending my money to come down here and give my testimony in this case. If that line were constructed, I would route my product that way absolutely. As to whether, in my opinion, other shippers of perishables in the Umpqua Valley and in western Oregon generally would generally route their traffic that way, if it meant a saving in distance and time, if there is anybody in our community that doesn't want the cross-State line I haven't met him. From conversations and meetings, I am sure other shippers would route their traffic via the cross-State line. (4071.) It has been brought up at various growers' meetings and chamber of commerce meetings, and it has always been the unanimous opinion.

Q. There has been testimony by carrier witnesses to the effect that by reason of the fact that the Southern Pacific Company originates the traffic they would be able to, in their opinion, hold the greater proportion of it to their own rails for the long haul, regardless of the shortening of distance via the cross-State line. What is your judgment as to that?

A. Well, they tried to do that with me regarding shipments by way of Portland, but it didn't work. We go by Portland. I would change just as quickly over to the other way, because that would still be another saving, the cross-State line as compared to Portland, as I see it.

They were very anxious to get me to ship via Roseville, and I offered to give them a day's business providing they equalled the time, and Mr. Sproule declined the business. (4072.)

2259 Cross-examination:

I would say that approximately I shipped 120 cars. I don't remember the exact number. I couldn't tell you to what destinations. We saw, as I say, around 40 or 50 markets, usually, in the season. I haven't checked on this year's business. We went as far south as New Orleans, and I think we went to a number of Canadian cities, Toronto, Montreal—Boston and New York. As to how many cars we shipped this year to destinations to which the cross-State line

proposed here would have the shortest mileage, I would say all, with the exception of a few cars to Vancouver, B. C., or some market like that—to Portland or Seattle. The Umpqua Broccoli Exchange is our exchange, but I think the Southern Pacific Company's records figures that we shipped 88 cars is wrong, because we ship from more than one station. (4073.)

Q. Just a moment until I give you the figures, then we will see whether they are wrong or not. Portland, six cars, Seattle, seven cars, and Portland by way of the Union Pacific to the East, 75 cars, or a total of 88; is that correct or not?

A. I don't think it is correct, sir. I think we had more than that. I am sure we had over 100. I was under the impression it was between 100 and 125, but I didn't give any exact figure, because I didn't know it would be less. I could have looked it up.

As to how many cars were shipped east out of the district down there this year, I think that we shipped about half of them. I don't remember the exact number. Something over 200, though, I think.

Q. Well, the railroad company's records show 173, of which 163 moved Union Pacific by way of Portland, and 10 of them over
2260 the Northern Pacific by way of Portland. Do you know why those 10 cars were shipped through the Portland gateway by way of the Northern Pacific?

A. No, sir; I do not. I haven't heard of the Northern Pacific (4074) giving any special fruit service out of Portland. I don't know that they give anything special.

Only in the beginning, when we were more or less inexperienced did we route our broccoli through Roseville to the East. We changed to routing through Portland because, in the first place, we felt that we could get a better condition, cooler climate, that way than through the hot Sacramento Valley, and we changed for that reason, and we found that there was a saving in time, shorter distance. At the time that we shipped through Roseville to Chicago I think we were making about 13 or 14 days, somewhere along in there. After we changed through Portland we cut off about a couple of days. At that time we would be about 11 or 12 days from Roseburg to Chicago. That was back in the beginning; I would say in '20, '21, along in there. (4075.) There has been an improvement since then. I commenced changing the route from Roseville to Portland about '22 or '23, I think.

Q. Well, did you route anything through Portland to the East prior to the time that you telegraphed to Mr. Sproule, as you testified here a little while ago?

A. Yes; we had had it both ways, and the Southern Pacific was anxious for us to give the Roseville business, and in appreciation of the local employees I offered Mr. Sproule the day's business provided he would give us equal time, and he declined the business; he said we should let him route it as he pleased.

As to what year we first started the abandonment of the
2261 Roseville gateway for the Portland gateway and commenced

to move a substantial quantity through the Portland gateway, I don't think we changed over entirely. I think we were inclined to listen to the pleadings of the Southern Pacific. We couldn't afford to be mean (4076) with them. We didn't want to take the business away from them. They thought it was mean. It was just a matter of expediency with us. We were one and two, I would say maybe three, seasons in changing over entirely. When we made the substantial change there came a year when we routed everything through the Portland gateway. I couldn't tell you exactly what year that was. I would say '23 or '24, somewhere along in there. I couldn't tell you exactly what time they were making for us then through the Portland gateway from Roseburg to Chicago. As I say, the last season or two it has been nine and 10 days by the way of Portland. We haven't shipped any the other way, so I don't know what that time is now. We put all our routing through Portland to save time.

Q. You mentioned a telegram that you sent to Mr. Sproule. I will ask you if what I now read you is a correct repetition of that telegram: "Having had numerous controversies with the Portland management, have given Portland routing entire shipment several hundred cars broccoli. In appreciation (4077) wonderful service, loyalty, courtesy, your employees at Roseburg and other loading stations, also Mr. Rosenbaum of Medford, have decided to route entire shipments one day, probably 40 cars, by way of Ogden. Can you equal by way of Ogden route the time now being made by way of Portland averaging eight and nine days Chicago? Please answer." Dated March 5, 1926.

A. That is my wire. The controversy wasn't over that matter of routing, though. That was over an industry track prin-
2262 cipally. We wanted the Southern Pacific Company to put us in an industry track to our plant at the company's expense, just as they do in Phoenix, Arizona.

I think I have heard of order 15, issued by the Director General during the war period. That is regarding installation of tracks. I find, though, that the Southern Pacific anticipated in Phoenix the need of tracks, instead of waiting for the request of the shipper to build them.

Q. Well, you carried that controversy to the shippers' (4078) advisory board at Tacoma, did you not?

A. I carried it a number of places. I don't think I skipped Tacoma. That was the principal controversy I referred to here with the Portland office. That was not the underlying reason why I routed the shipments through Portland. I explained to various Southern Pacific officials, Mr. Mulchay, and a number of others, that my main reason was the saving in time. I have some good friends among their people, the S. P. people at Roseburg, and if the conditions were equal, regardless of my feeling toward the powers that be in Wall Street I would give the S. P. the business if they could equal the time. (4079.)

Q. (By Mr. DEY.) Well, what did you mean by this statement: "Having had numerous controversies with Portland management have given Portland routing entire shipment several hundred cars of broccoli"?

A. Well, there is nothing in that, only just to show Mr. Sproule that we didn't get along very well here together over the matter in some of the policies of the company. It was merely an attempt on my part to show my appreciation of the support toward the local men, my kindly feeling toward them. Mr. Sproule answered
2263 me. I could not tell you exactly what he said. Roughly my recollection of his reply is that he thought we should merely leave the movement of the cars to the carriers, and he didn't seem inclined to handle the business. He did not accept my offer to route those 40 cars, one day's business, via Roseville, in consideration of equaling the time that I claimed to get via Portland. I took it that he declined the offer. (4080.)

Comr. MCMANAMY. Now, you were asked concerning the land being suitable for broccoli. You stated that there were many acres there that were not cultivated that were suitable. Can you give me approximately the percentage? Could the present acreage be doubled, or how much could it be increased approximately?

A. Well, I could not answer that, Mr. Commissioner. I have never made any survey of it. I know it is merely a matter of price, and price depends largely upon the condition of the product in the market. I ship the product under top icing. I have been doing that ever since it has been in vogue, for a number of years. You can't ship without that. I have testified in previous hearings we let the P. F. E. experiment with that, and it cost them $1,700 on two cars by not using top icing. They paid the damage. We very seldom have a claim with respect to the condition in which they arrived at destination. We have a connection in most markets, an established connection. We have been doing business with them for a number of years, and they know our product, the way we pack it, the railroad conditions, and the time, and we are in the habit of selling it on an f. o. b. basis. (4081.) Under those conditions the claim would be made by the buyer. We sell it on the f. o. b. basis. Occasionally we ship cars unsold, and they are sold on arrival at market, but usually we sell on the f. o. b. basis.

There was just a small experiment made with shipping in
2264 sealed oil paper; to no extent. We would put a few of those crates in a car as loaded ordinarily for a matter of test, and while they went through as reported in a very nice condition, the trade does not seem to take them because they lacked the leaves. We trim them. Naturally, the reason for the paper was to eliminate the heavy foliage, to lower the freight cost; and, while the condition of the product was very fine, it seemed that the housewife or the buyer didn't like the product so well when it lacked that green foliage. That paper did not make any difference in the price. The

buyer took the car straight through, but he made the comment that he didn't think it would be practical. As I say, we only shipped two or three crates; naturally, the buyer knew we were doing it as an experiment. He didn't even give us any report further than to say "it looks very nice, but we can't sell it (4082) this way," or something to that effect. The paper was put on just to take the place of the foliage, at a less freight expense and for the purpose of preserving the product. We felt it would keep the air off and protect it and benefit it probably in that way. It would naturally have some protection. You see the leaf coming all around the stuff shipped upside down—we pack a crate with the heads up; when we go to put the top ice on it we turn the crate over, so it is like a duck's back; it would be shedding the water falling from the ice. As to whether the broccoli would keep better with the foliage or without it, the idea is to keep the foliage green. I think the foliage creates a heat. It is a green commodity and packed pretty tight in the car, with only slight ventilation, and that is the reason we have to put ice in there to keep it cool.

Our time through Portland to Chicago varies, nine or 10 days.

I think there is a record of it. I mentioned in that wire
2265 there eight days, but that was a record very seldom made in my experience. I asked Mr. Sproule to (4083) equal eight or nine days. I will be very candid, in saying that I wasn't giving myself any the worst of it there with Mr. Sproule. I wanted him to do his best, if he wanted to take that business.

As to when our shipping season begins, it varies—I think we have had cars move the last day of January and the first of February, and it lasts into April. As I recall it, when I offered the Southern Pacific Company the routing through Roseville on March 5th, that was in the peak of the season, the heavy movement, when I sent him this wire. It must have been when I offered him 40 cars. I have the reply Mr. Sproule made to that in my files at home.

Mr. DEY. I will read it into the record, if you wish. Mr. Foster Butner, Roseburg, Oregon: Your wire sixth—well, it means fifth. "Appreciate your consideration (4084) with train load of broccoli. Prefer movement be left to us to handle either by way of Portland or Ogden gateway as operating conditions may exist the date of the movement. You can rely on our desire to handle to best advantage for the shipper in any event." Signed, "William Sproule."

Mr. Sproule is president of the Southern Pacific Company; was then and is now. Mr. Paul Shoup that the witness referred to the other day is executive vice president of the Southern Pacific Company.

Q. You don't know, I suppose, Mr. Butner, as to whether or not it would be difficult, from an operating standpoint, figuring your power and lineup of movement of traffic, to switch a movement for one day in opposite direction through a different gate-

2266 way? That is an operating matter I suppose on which you would not be informed?

A. Well, from my impression, gained by conversations with the Southern Pacific men, that they had the service there and (4085) all we had to do was to hook onto it.

As to how many cars a day our shipments amounted to, it is very irregular, but I think that something like 30, 35, to 40, along in there, has been our peak per day. You know, that is in peak movement, the heavy movement. And ordinarily during the season, why, two or three, or four or five cars, just as conditions are. It is a weather crop. If the weather is warm you get a heavy cutting to-day, and if it turns off cold and you get a frost, it will be very light. We frequently have a little snow and frost. It varies frequently throughout the country—light frost. The movement extends over February, March, and part of April. Something like 60 days. This past season was a very light season. The heavy movement was 1926, and it was around 1,000 (4086) cars for the whole district. That 120 cars was my shipments, not the total movement for the district. As he has it, it was 80 odd. I don't remember the shipments. I don't think you could estimate the number of cars of broccoli that move per day out of that territory. As I say, it is a weather crop. If the weather would be warm to-day there would be a tremendous movement. If it turns off cold we have had to stop it almost entirely, I think, if there would come a cold spell. I think the railroad records and people will bear me out in that. It is a weather crop strictly. It is a flower that turns to bloom and it quits blooming when it gets cold.

2267 Mr. DEY. Mr. Butner, the year 1926, that season in which you sent the telegram, the railroad company's records show that you sent east through the Portland gateway 469 cars. That is about right, isn't it?

A. I think our exchange shipped over 600 cars that year. I don't remember. That was to all destinations, that that went through the Portland gateway. I would say offhand it was (4087) correct.

J. P. NEWELL was thereupon recalled and, having been previously sworn, testified as follows:

Direct examination:

I have prepared some charts to be introduced as exhibits.

(Said charts were thereupon marked "Complainant's Exhibits Nos. 119–128, Witness Newell.") (4088, 4089.)

Mr. Burckhalter called attention to the unbalanced condition of the traffic which had been estimated for the cross-State line, that the necessary empty cars for eastern movement were not fully accounted for. That was true, and I had noted—in my Exhibit 16 I spoke of that and stated the reason for treating it as I did.

I calculated against the cost of each eastbound car 60 per cent of the cost of the empty west, because that seemed to be a normal condition for northwest coast traffic. If I had treated it as it actu-

ally was, with about a 95 per cent ratio, the showing of saving would have been correspondingly greater on the empty cars, would have increased the apparent savings via the cross-State line. I did not do it because I think that that condition would not con-
2268 tinue to exist if that route were open through as a regular route for traffic. It seems to me it must, in all probability, at least, come to the normal conditions of the rest of the country. I would have used 90 per cent if I had taken the condition of the actual movement as it was in 1926. There were something like only about 5 per cent as many loads west as east. So there would have been a 95 per cent balance of empty cars required in order to supply the cars for eastward haul, my assumption all the way through being that the empty cars would come back the way the loads went. (4090.) I measure the necessary empties west by the loads going east. I presumed the empties would come back the same way the loads went; and that all necessary empties would be hauled by that same route. I included the cost of moving the empties in my calculation with the cost of the loaded movement; that is, that excess of empties over that which is provided by unloads at the western end. I include the saving. Then when I come to that I have the saving on those empty cars west as well. That is, I treat the eastward movement as a combination of an empty west to the extent of 60 per cent, plus the full cost of the load east.

As to the commissioner's question about calculating the cost, I haven't calculated the total cost of any of the movement; I have only taken the direct cost wherever I have it. I haven't calculated the total cost (4091) in that sense anywhere. I have calculated total direct cost, including necessary empty car haul in every instance. And the estimate of the number of empties to be moved is, of course, a factor affecting that cost. Now, if I had taken 95 instead of 60, I would have shown larger figures of gain by the shortened route.

Q. (By Mr. McCulloch.) Mr. Newell, just one more question before you go on. Does the cost of moving an empty car west
2269 to be loaded in western Oregon constitute altogether a direct expense, or is any of that cost indirect?

A. Well, I am dealing only with the direct cost, and whatever cost is thereby caused for the empty is a part of the cost to be attached to the shipment for which the empty is used. In getting the empty back into western Oregon for loading there is an indirect cost which has to be borne. No indirect cost attaches itself directly to any movement, either a load or empty. That is the very nature of it, that it is separate from those considerations. But in your considerations of how the indirect cost is to be met, that, as a practical (4092) question, must all be covered by the loads. The empties, of course, bring no revenue.

I was discussing my use of the 60 per cent ratio instead of 95 per cent. I was not attempting to balance those cars in that case; I was attempting to figure what those costs will be when the same conditions of relation of empties to loads have established themselves

over that new route that exist on the other northern routes. Now that is the explanation of why I used that. Now Mr. Burckhalter asserts that a different condition exists as regards this route, and I want to consider what the effect of that would be. He says, in effect, as I understand his statement, that there is a surplus of house cars in California which is provided by the natural flow of traffic to that State, and that this is normally sufficient to supply all the needs of such cars for eastward shipments from Southern Pacific points in Oregon. He says that there are no empty cars moving in from Ogden to Oregon, and therefore that there would none move either via Alturas or via Crane, and that consequently there could not be any saving in that empty car haul.

2270 Now, in justification of myself for not being aware of that as a fact, I note that Mr. Burckhalter himself said four (4093) years ago in the hearing that western Oregon was the hardest place in America to get an empty car into, and I can't understand how that condition can apply when there is a surplus of cars in the neighboring State for which western Oregon is the nearest point of use. I did not hear his further explanation in regard to that, but, as reported to me, I did not understand that he had explained it. That is the point that I raise. I am not doubting his statement, you understand; I am merely showing that it apparently is a new condition. It surely could not have existed at the time he made that other statement. And furthermore, his Exhibit 103 shows more loaded cars of the kind described going east through Ogden than there are similar loads coming west. I haven't heard any explanation of that. The only apparent explanation could be a very great excess of the opposite nature coming in through El Paso. This is about a quarter more of box and auto cars; leaving out coal and flat the excess is about 50 per cent. There are a few coal and flat cars coming into this exhibit. (4094.) Now to whatever extent those empty cars do come from California to Oregon to be loaded for eastward movement, they will surely continue to come when the Alturas line is built, and when the Crane line is built the same reason economically for transferring to Oregon will continue to exist, because it will be the nearest point where they can obtain loads. It will be more economical and more profitable for the Southern Pacific to send them up here to load than it will to haul them empty to either El Paso or Ogden and dispose of them. I can see no reason for any change in those conditions. That would be true if, as testified to by Mr. Burckhalter, the distance to El

2271 Paso is about the same as it is to Oregon. I would hold it would be true the empty haul would be the same in either direction, because at El Paso it would be disposed of so far as western division is concerned, whereas by taking it to Oregon it would get a load. But, as I understand his statement, it would be rather farther to El Paso from the center of gravity of these empty cars than it would be to Oregon.

Mr. McCULLOCH. I think, Mr. Commissioner, my impression is that Mr. Burckhalter was referring to Ogden as a point to get those empties back to their eastern owners rather than (4095) El Paso, when he was comparing the distance that would be involved on one hand in taking them up to Oregon for loading or taking them back empty through one of the eastern gateways and delivering them to their eastern connections.

Comr. McMANAMY. Very well. The record will show, but he was talking about Rock Island cars.

Exam. ROGERS. As I remember it, he was talking about the distance from Los Angeles to El Paso and Los Angeles to Oregon.

The WITNESS. Well, it must be that a great number of those cars are unloaded north of Los Angeles, although I believe he testified that Southern California was the chief point. Now to whatever extent those empty cars will continue to come from California in place of coming across from Ogden, my statement as to possible earnings will of course be reduced; that is, there will be no savings by the haul of the empty car that will continue to move as now. Our saving on the empty car mileage will be wiped out, of course, if all of those cars are to come from California. There will be no saving on empty backhaul, because there will be none.

2272 Mr. Burckhalter commented on my error in omitting the (4096) cost of the empty haul from Omaha, but I can't see where that comes in; if those cars are coming from California there is no occasion for considering any empty haul from Omaha either as a saving or expense. It does not enter into it. It would be a condition under which the Southern would take the entire burden of furnishing the empty car and the Union would get the load without any expense of the empty haul. So I want first to show what the effect on my figures would be if we assume the condition described by Mr. Burckhalter as completely covering the situation, that is, that all empties would come from California, no empty burden whatever on the Union Pacific. Now it is not of vital importance in the question, but in order to show a picture of relation of earnings to cost, approximately correct, I take 850 miles as the average haul of these empty cars from California to Eugene. It is 625 miles from Eugene and 978 miles from Los Angeles. I am taking the distance that is nearer the Los Angeles distance, applied a small amount—San Francisco is 625 miles from Eugene; Los Angeles is 978. Now on the basis of figures of empty haul, which are in (4097) my Exhibit 16, I find for those 850 miles cost for the empty haul at $73.45. Now from my own tables in Exhibit 16 I find that if I leave out refrigerator and stock cars I had for the first year of the new line, on the supposition that the Alturas line was built and that we had only the other traffic to consider, that there would be 17,535 cars east and 2,602 west; that is a percentage required for eastward movement, therefore, of 85 per cent. I therefore took 85 per cent of that $83.45, or $62.50, as the average cost of

the Southern Pacific on the empty haul for all the loading, and I substitute that for my former calculations of empty hauling as
2273 against the Southern Pacific, and eliminate entirely the cost of empties from Union Pacific movements. Then I repeat the calculations which are on page 117 in my Exhibit 16, on the establishment of suggested joint rates. I suppose I ought to read this. This is not being made an exhibit. (4098.)

Mr. McCULLOCH. I am going to offer the whole thing in the record, as soon as it is explained.

The WITNESS. Well, I treat it as before, finding the net earnings of the two carriers under the supposed conditions, and on the exchange at Ogden with haul via Alturas, and find the Southern on that making a net of $61.37 and the Union Pacific $81.70. Then, in order to protect the Southern, I conclude that it would need to have 36⅔ per cent of the joint rate, and proceed to apply that to these same calculations of car movement and earnings; finding, therefore, that the Southern Pacific on those cars destined to Omaha would have a reduction in its net of $8.50 on haul via Crane and the Union Pacific, an increase of $31.05. On those cars destined beyond Omaha, which is the bulk of the traffic and on which the Southern Pacific would, under the haul via Alturas and exchange at Ogden, make $31.62 and the Union Pacific $63.70, would, under those proposed divisions, be a net for the Southern Pacific of $33.62, which is $2.00 more than at Ogden and for the Union Pacific of $20.55. (4099.) Let me correct that: For the Union Pacific a net of $84.25, which is an increase in its net of $20.55. The number of cars moved to Omaha, sustaining a loss to the Southern Pacific of $8.50 each, would be exactly balanced by the larger number going beyond Omaha, and giving to the Southern Pacific an increased net of $2.00. I then revise the first part of my Table 21, page 141, of Exhibit 16, by
2274 the substitution of these reduced net earnings per car and find a reduction in those earnings of $161,795 for the first year. And for the fifth year a reduction of $236,007. Now these reductions would reduce the rate of return shown in my Exhibit 107 on page 8 for the first year from 6 per cent to 4.4 per cent, and that of the fifth year from 10.4 to 8 per cent, and other years in proportion.

Right at that point I would like to digress a moment, because of a question which the examiner has asked several times about the fairness of these divisions, and point out a difficulty that comes there in determining that. You will note here that in these figures I have $62.50 to be charged as a cost figure for the Southern Pacific, giving it on that basis a less net earning out of traffic (4100) which it originates than falls to the Union Pacific on the division, but the question would arise there, and I do not know how it would be answered, whether the Southern Pacific's cost should be considered as beginning at the time it took the empty car from the unload point in California, or from the time the empty car was delivered in Oregon, because if it did not send it to Oregon to be loaded it would have to move it to some other point somewhere near the same distance, pos-

sibly a greater distance, without any revenue whatever. Now, that would be a question, I think, that would be difficult to determine, whether all or any part, or what part, of that empty car movement ought justly to be attached to that cost.

The question as to whether the transportation rate under which that car moves to California contemplated the return empty haul of that car could not be considered alone. The whole thing would have to be taken into account. It would be a difficult matter to determine.

On the one supposition the Southern Pacific is getting the
2275 short end of it; on the other it would get the long end of it by about an equal amount.

Now as regards Mr. Burckhalter's statement as to the empty car movements, I find his Exhibit 103 showing 7,000 empty cars, in round numbers, suitable for this loading west through (4101) Ogden in 1926, and in his oral testimony he said that about 8,600 such cars moved west in the same year through El Paso. Now that together is more than the entire first year requirements of empties for the Oregon cross-State line. Now it seems to me beyond question that a great part at least of those empties would not have been hauled west if it had not been for the needs of Oregon traffic. I can't determine whether it would be all, or how much; I haven't any data at all, except what Mr. Burckhalter gives, and it is difficult to interpret another man's statements as regards that; but I can't but think that certainly that condition must, in a considerable degree, modify his statement that all the empties would come from California, by mere process of taking the unloads. So the only conclusion I can come to is that the true statement is somewhere between the figures which I have presented and those which he has presented as a criticism of mine.

Exam. ROGERS. Going back to your comment a moment ago about the fairness of divisions, would that not also involve the question, Mr. Newell, as to whether in fixing the rate on these commodities from western Oregon east there was taken into consideration where the Southern Pacific would get its empties and the condition under which it would get its empties to move those commodities?

A. If that were the only carrier and the only commodity, undoubtedly that would have to be taken into account. But as a
(4102) matter of fact, those rates are established all along the coast, taking in all the carriers, and I think no such condition
2276 exists elsewhere, and this being the long route as compared to the others. I suppose it to be the fact that the rates are established on the consideration of the other carriers rather than of this one and that these would have to correspond. We would have to determine the basis upon which the transportation rate is fixed before we could really say what it would be with positiveness. But surely the rates must take into account the average movement of empty cars, because it is a large part of the cost, against which the carriers could not live, if that was not taken into account. If the rate were established by the Southern Pacific, or established by somebody for the Southern Pacific movement, and then the rates via the other car-

riers simply met that rate, then the Southern Pacific—its conditions would be the controlling conditions. Of course, this condition always exists: That a carrier makes much more money on a car of freight which can be loaded in a car which has come to it with a load, than it does where it has to haul an empty the whole distance to get the load. But the normal relation of those two must be taken into (4103) account as a cost element. That concludes the comment I had to make on Mr. Burckhalter's testimony.

Mr. McCULLOCH. Well now, you have some comments on Mr. Day's testimony. I shall offer that statement as an exhibit a little later, because I have previously had some other exhibits marked for identification.

(Said statement, consisting of four sheets, was thereupon marked "Complainant's Exhibit No. 129, Witness Newell.")

WITNESS. I had some comments on Mr. Day's testimony. The difference between Mr. Day and myself in these matters is chiefly the question of the point of view. He is dealing with them, as I understand, in his work, from more a temporary point of view
2277 than mine, or one that does not attempt to go so far into the future. The comparisons that he spoke of were chiefly those where he observed monthly (4104) variations in expenses. I am really surprised to find that he was able to trace the effect of fluctuations in traffic so closely as he testified that he could. I mean so minutely; because it has been my own assumption that those minor fluctuations in traffic would probably make themselves felt in expenses only to a very small degree, because I think this is always true: That with any force of men if there is a small increase in the amount of business coming in, that those men, if they are loyal to their employer, as railroad men generally are to their employer; and being loyal to their employer they work a little bit harder and push things along a little bit more efficiently and put a little more force into their work generally, feeling that business is good and that they ought to do it; and, as a consequence, I would not expect that cost would run up immediately in proportion to traffic. On the other hand, if business is falling off, men are very apt to feel perhaps there are going to be some men laid off and they had better slack up a little bit and make it necessary to keep the same force on there. The same considerations operate just in the opposite directions. So it seems to me perfectly natural that minor variations of traffic will not make themselves immediately felt in expenses. (4105.) But neither one of those conditions could exist a very great length of time. No management would permit its men to be slacking off because business was falling off, and pretty soon it would come to the other way about; if anything, where they would begin to lay men off, to reduce the force and demand more activity out of their men.

On the other hand, if the business continues to increase and it appears to be a permanent change, the men themselves are

2278 not going to consent to do more labor than they feel just. They fall back—the men come back in both cases to the normal condition of activity and energy on the part of the force, and in relation to its efficiency, management, and so forth. So that then I consider that the effect of change of traffic in volume of traffic itself would be truly felt, and for that reason I have never thought any accurate comparisons for my purposes, where I want to consider this thing from a rate-making standpoint, could be of any value, if they were taken over brief periods of time or for minor small differences in volume and density of traffic. I think it requires comparison with conditions which are quite widely different as to variations in traffic so as to get rid of the effect of these minor variations, which will exist always and on any road. (4106.)

Mr. Day spoke about the use of the Railroad Administration's rule for the effect of traffic on various expenses. Now it is some years since I saw that rule, but I studied it at the time to see if it had any light on the subject from my standpoint. I concluded that it did not. While I have no criticism of it at all for the purpose for which it was established, it seems all right, and as I understand it was necessary in settlements of that nature that there be a rate established which might apply to every carrier so that there need be no disputes as to the manner of its application, but I think it is quite obvious that the percentage of indirect expense in itself must vary with the volume of the traffic. Suppose, just as an illustration, you had your maintenance of way; suppose you had two roads practically identical in their character, except in their volume of traffic; suppose the smaller one has a maintenance expense, let us

2279 say, of $1,500 a mile, and we conclude from examination of it that $1,000 of that is a direct expense and $500 of it is indirect, then if the other road similarly conditioned has three times as much traffic, you would expect to find that $500 figure multiplied by three, giving you $1,500, and the (4107) $1,000 figure remaining is constant as not affected by the traffic. So that you would then have for the larger road a total of $2,500, of which 60 per cent is direct, while in the smaller road you would have only 33⅓—you have only 33⅓ per cent direct, assuming that the indirect is exactly the same. Now that makes it improper, for the purpose of rate considerations, to apply a constant ration of direct or indirect to any account, regardless of the traffic of the road carrying it. Regardless of the traffic of that road. That must be taken into account in any rule of that nature.

Exam. ROGERS. But if, on the other hand, Mr. Newell, quite aside from this case, if you were considering the rate structure, say, to apply to all carriers west of the Mississippi River, then do you think it would be proper to apply some general figure, as, say, a third of the maintenance of way and structural expenses?

A. I think the proper way to do it would be to take varying roads, which might be taken as a fair cross section of all of the roads, and

make such calculations on more than one of them and consider the results obtained. That might be a third, it might be a half. I could not answer what it would be. That would bring it more in line with the (4108) Railroad Administration method. As Mr. Day referred to it. But, as I say, it was necessary to have such a rule, I think it must have been too liberal in some cases and not liberal enough in some others. Mr. Day commented on my
2280 coal cost, fuel cost, rather, on the Southern Pacific. I would like to go back and show in regard to that, that if there was any error in my figures it was not in principle but merely in the use of facts, and I think the facts as I found them, unless they are contradicted by something else, bear me out approximately, at least, in the figures which I used. (4109.)

On page 61 of my Exhibit 16, I compare the cost of fuel, Oregon-Washington Railroad & Navigation Company and Southern Pacific, both on the Oregon lines, and I found that train fuel per thousand gross ton miles on the Oregon-Washington Railroad & Navigation Company in Oregon cost 53.9 cents, while on the Southern Pacific it cost 73.2 cents. It is not six tenths, it is 73.2. I corrected that because of the difference in grades on the roads in this way, that if the Southern Pacific lines in Oregon had exactly the same resistance to be overcome, as on the Oregon-Washington Railroad & Navigation Company, the relative cost would have been 53.9 for the Oregon-Washington Railroad and Navigation Company and 70.6 for the Southern Pacific. That is, the Southern Pacific fuel on that basis cost per thousand gross ton miles nearly 30 per cent more than the O.-W. Now, it is true that it has more branch lines than the Oregon-Washington Railroad & Navigation Company. I found that the branch line fuel cost on the O.-W. whole system—not Oregon alone—was about 20 per cent of the entire fuel bill, while on the Short Line it was a little less. I don't know what it is on the Southern Pacific, but in any of these carriers the main line fuel bill very much outweighs the (4110) other, so that I think that I was certainly, to all appearances, at least, very liberal to the Southern Pacific in assuming as I did that the fuel cost was not greater than that of the O.-W., and it is that fuel cost entering into my unit cost of resistance of which Mr. Dey was speaking, and that par-
2281 ticular figure, the highest that I used anywhere, was applied only in Oregon. I didn't apply that figure in California or Nevada for Southern Pacific movement.

As to Mr. Day thinking that because I included the branch line fuel cost in computing the figure to be used on the main line, and because the Southern Pacific branch lines constituted the larger proportion of the total mileage, that threw it up, he is mistaken about that. On the Oregon-Washingon Railroad & Navigation Company I made a reduction because of the branch line fuel bill to bring it into line with main line fuel cost for similar performance. Now, when

I came to the Southern Pacific I wasn't making the same detailed analysis of its costs as the O.-W., but I took the unit of the O.-W. which had just been reduced and still further reduced it arbitrarily—or not reduced it, but I mean took the higher cost, disregarded the higher cost, apparently, on the Southern Pacific for branch line and main line together, and used the O.-W. main line figure for the Southern Pacific main line. Now, it is true that (4111) might not be quite sufficient reduction, it might be that it would be a little less, because of the relation between the branch line and the main line mileage; on the Southern Pacific, there being more branch line.

Mr. SPENCER. Is that true as to the system—the Southern Pacific lines in Oregon have a larger per centage of branch line mileage, when you take into consideration the two main line routes from Eugene to California, than the Oregon-Washington Railroad & Navigation Company has if the entire Oregon-Washington Railroad & Navigation Company system is considered?

A. No; I think not. My comparison was with the Oregon-Washington Railroad & Navigation Company in Oregon, which is about 40 per cent main line. In applying my figures to the cross-State line I considered it main line. On pages 62 and 63, of
2282 Exhibit 16—I didn't apply those figures to the cross-State line. Mr. Day's comment was on my figures applied to the Southern Pacific. I modified my unit costs as shown in detail on these two pages of Exhibit 16 to suit, as I considered it (4112), the varying conditions of the different districts over which I was calculating costs. I considered the cross-State line as one, the Southern Pacific lines in Oregon, as another, the Southern Pacific lines from the Oregon boundary to Ogden as another, the Short Line and Union Pacific I took as the same, applied correspondingly different unit costs, after making allowances, as stated here, for differing conditions. Those conditions aren't very great, but they expressly take into account this difference in fuel cost as indicated by the cost per thousand gross ton miles of these different carriers. If there was any error in that it was an error in interpretation of facts rather than the principal of the application here.

I assumed that the cost of fuel on the Southern Pacific was the O.-W. R. & N.'s main line average cost for Southern Pacific main line in Oregon.

Mr. Day was speaking particularly about the hills. He made the remark that he thought I hadn't allowed sufficient for cost of operation on hills. Well, now, there are only two important hills in this connection at all—one is that from Eugene to Crescent Lake, and the other over the Sierra-Nevada Mountains in California. Now, the latter isn't important in this contention, because the real contion is, of course, on the (4113) comparison with the Alturas line, of which that is no part; and as far as the hill from Eugene to Crescent Lake is concerned it is common to both routes, and, therefore, its cost is of no importance, other than merely keeping in mind

the relation between the total cost and rates, and is put in
2283 only for that purpose. As far as these comparisons are concerned, if I took it twice what I did or half what I did it would have no effect on the results, it would only make my relation between total cost and total earnings look out of place, or be out of place.

Mr. Day spoke about my percentage of direct cost of maintenance of equipment being too great, taking it at 100 per cent. I think he said that it ought to be about 80—I am not certain what figure he used, but quite a little less, in any case, than I did. Now, he may be right from his standpoint—that is to say, that, assuming that here is your equipment, perhaps an increase in business would reflect only that additional maintenance on that equipment, but I am looking at it this way, and I think for my purposes it is correct, while his is correct for his. I say that equipment would not be there at all if it were not for the growth of business to the point it has reached. I think the management of the company is carefully keeping that equipment in proportion to its volume of business. If its traffic increases, it will make a corresponding increase in its equipment. If the business falls off, they will, as soon as they are satisfied that it is a permanent falling off, they (4114) will undoubtedly reduce that equipment, if such a thing were to happen. Now, if the entire investment in equipment is due to the traffic and is variable with it, then surely the maintenance itself must likewise be. That is my reasoning on the subject, my reason for taking that as 100 per cent.

Exam. ROGERS. Let's see if I understand that, now, I understand Mr. Dey's premise was that the equipment was going to remain the same in either case, that is, the number of units, and so on, the total tractive power on the lines, than according to the number of tons which that equipment hauls 80 per cent of the expense would vary with the——

A. Something like that. I think that is a very reasonable
2284 estimate. My assumption is that I am talking about the total equipment on the line, and the total equipment on the line will vary with the traffic moved. Not, of course, immediately, but I am not looking over it for such a length of time as you are taking into account when you are making rates, but that if the volume of equipment itself varies, necessarily all the expenses connected with it must likewise vary in proportion to traffic.

When I say "such length of time as I would take into account in making of rates" (4115) I mean time, at least, measured in years. I don't know exactly how many years it would be, but I wouldn't suppose that even a change expected to last only one year would be affected in rates, although it might. That would be variable with differing commodities, no doubt.

Exam. ROGERS. Well, Mr. Newell, on your maintenance of equipment, suppose that you have 1,000 locomotives on the line, and those

1,000 locomotives are sufficient to handle the business, then business increases until you have 1,100; now, is it your thought that the maintenance of equipment expenses would go up at the ratio of 1,100 to 1,000?

A. Probably, yes. Assuming all other conditions to be the same, of course. I am trying to leave out of consideration anything like a difference in efficiency—better engines, or management that gets more work out of each engine; that is a question of efficiency.

Exam. ROGERS. But take the question of ship buildings, might you not have a case where the shops were adequate to take care of the maintenance of equipment on 1,100 engines, without any increase in facilities? (4116.)

A. Quite true as regards the buildings. Now, it might be true, also, as regards the shop equipment. It might be true as to some superintendence. As to superintendents of motive power and
2285 master mechanic, it isn't probable that the superintendent of motive power woud get any bigger salary when he had 1,100 locomotives than when he had 1,000, still he would be nearer the time when he would get his pay raised.

Exam. ROGERS. Or that there would be any more superintendents of motive power?

A. Yes; but suppose that increased up to the point where they do have to put on more shop equipment, all at once there would be a big jump there—not a large jump but still a proportionate jump, in that one item. Now, I think that ought to be considered over a natural, slow growth, rather than wait for the particular year when it would actually occur, which no one could calculate beforehand.

As to these charts. These were made primarily for my own study. (4117.) They were not intended to be used as exhibits for some considerable time, but I thought it would be well to have some of them ready in case any discussion of this kind arose, and I had some photostats made of the few that I had and those are what I have here as exhibits. They are merely pictures. I haven't preserved the calculations from which they were made, otherwise I would reserve those, because they would be made the basis for calculation. These are not intended for anything more than illustrations, but in this Exhibit 119 there is the study of relation of traffic to operating expenses for the year 1915. (Ex. 119.) In any discussion of that kind it is a difficult matter to determine exactly what unit is to measure your volume of traffic. Different roads have different proportions, of course, of different kinds of traffic, but I hit upon this as at least a fairly close approximation. I found that on some roads of which I had the figures—the Southern Pacific, as I recollect, being one of them—that, approximately, the
2286 operating expenses charged off to passenger amounted to about 3.7 times as much per passenger mile as those freight expenses when divided among the net ton miles, so for this purpose I as-

sumed that one passenger mile meant as much traffic as 3.7 net ton miles, and I therefore (4118) took the net ton miles of the roads under consideration and the passenger miles, multiplying the latter by 3.7, and calling the total a traffic mile, then I divided that by the miles of road and made my chart accordingly.

The figures on the horizontal line at the bottom of the exhibit indicate hundreds of thousands of traffic miles per mile of road. Those vertical figures, the figures in the vertical column, are the thousands of dollars of operating expense per mile of road, and the chart indicates very clearly how rapidly operating expenses increase as its traffic, measured by this unit. The increase is not as rapid on the roads in going from a road of small traffic to one a little larger, but if you observe the ratio indicated by the straight line, which has been merely drawn in here by eye as being fairly indicative in the course of all of these dots, it increases in the upper part of the chart fully as fast as the traffic does, showing a tendency to reach a point in the roads of larger traffic where the operating expenses will be in practically direct proportion to the volume of traffic itself.

Now, the next exhibit, 120, takes the same traffic and simply uses as the measure of traffic the operating revenues per mile of main track and the operating expenses per mile of main track, and the uniformity of these is even more marked on this chart than on the preceding one. The dots all fall in (4119) closer together. As I recall, there are 30 roads used here, and those 30 are the same which are used in the tables in the appendix of my report on the
2287 grain case which was introduced here as 16-A in this case. And those roads I selected as being fairly typical roads, with no extraordinary conditions, such as a great preponderance of freight traffic or of passenger traffic. I made similar charts for 1916, 1917, and 1924, and I think a comparison of them and observation of how nearly alike they all are is significant of a uniformity of this condition extending over these four years.

As to 125 and 126, for the year 1924, and as to what the 125 and 126 indicate as to the relation of traffic to operating expense for the year 1924 as compared with the first two charts for the year 1915, there is no difference of any great extent. It is quite significant that the operating expenses are much larger, so that the line stands up more nearly vertical. (4120.) But that merely indicates a larger expense per mile. The relation of the traffic to operating expense shows the same, or approximately the same, in '24 as it did in '15 and subsequent years. I don't think that anyone could tell which of these was likely to be in a given year rather than in another year if the dates were covered up.

Explaining 127 and 128: This is a study of the same thing from the standpoint of operating ratio. It seems to me an obvious conclusion that if expenses do not increase pretty closely in proportion to traffic, that then the roads of the heavier traffic must have very

much better operating ratios than those of the small traffic, but these charts indicate that such a condition does not exist. If you will note that those at the left-hand side of the chart where the operating revenues per mile of road are much less than at the right, that there are many roads in that class having better operating ratios than such roads as the Pennsylvania, the Lackawanna, and the Reading, which are of the very highest density of traffic, as measured in this chart, high operating revenues. Likewise,
2288 also, there are at the left-hand roads of small traffic having very much worse operating revenues, as well, but on the average it seems from these charts that it makes not much difference what the (4121) volume of traffic is as to what the operating ratio will be—that is, that roads of large traffic have just about the same operating ratios as those of small traffic. I can not conclude from that otherwise than that the operating expenses must increase normally in a very close relation to that of the traffic, and I, therefore, think that Mr. Day is seriously wrong when he proposes to cut my figure for the O. W. of about 84 per cent direct, to cut it down by a third. I don't think that I am wrong in that to any substantial extent. I think the operating expenses are direct, very closely, in proportion as I have found them. I have made similar studies before this. My study of this matter has not been constant, but it has extended over a period of some 10 years and in different cases, this is the third time that such a study has been submitted before the Interstate Commerce Commission, that is, counting the grain rate case just preceding this as another one, but a similar study was first made in 1919 in the Columbia River differential case, and was reviewed again in 1924 at Walla Walla, with no serious attack on these figures. I made such a study on the Grand Trunk in Canada, and at that time there were on our staff some very able railroad engineers (4122), and I will say this, that each of them when I consulted him declared at once that my direct ratios were too large, wouldn't believe it, but after we had sat down and studied the thing, and I had explained my reasons and gone over it in detail they came to agree with me that I was correct—that is, in estimating the direct proportions of operating expenses. And further, I wrote an account of that study for the American Society of Civil Engineers in 1923, and they gave me one of their annual prizes for the best paper on transportation of that year.
2289 I think that subjected it to a pretty wide range of observation and criticism. That was in the annual proceedings of the society for 1923. Very glad to give you a copy, if it is of interest to you.

I have also made other studies the results of which I have charted along this same line, but which I haven't prepared for introduction (4123) as exhibits, that confirm those conclusions. These are with reference to single accounts. Some of them are, I think, not of any

importance here, and if they are not for exhibits here I will be glad to pass them around, if they are of any interest at all. There is a study on relation of traffic to roadway maintenance—not track-laying and surfacing, but roadway maintenance—and I have such for several different years. I have them here for relation of maintenance to water stations and traffic. This is based on 16 western roads which are named in this appendix to Exhibit 16. Now I am not talking about exhibits, but about these charts, which I am merely passing around that you might look at them. They could be prepared for exhibits, but I couldn't get them prepared in time for today, because I thought this matter was not coming up at all and didn't make any preparation for it. (4124.) Should I say anything about it? It has to do with relation of general expense and traffic.

Comr. McMANAMY. I guess the charts will not be particularly helpful to this case.

WITNESS. I have made numerous studies in the past of the relation of traffic to various accounts or items of operating expenses on various railroads. (4125.) I have charted the results of many of them. The study that was incorporated in Exhibit 16 in this case and in Exhibits 119 to 128, marked for identification, was made with the results of such other studies in my mind, and using those
2290 other studies, having them before me, and considering all the figures and estimates which I had previously used. I have completed such explanation as I wanted to give of Exhibits 119 to 128.

Exam. ROGERS. Mr. Newell, I was just wondering about one thing in connection with our maintenance of equipment, if we didn't have here a little reverse situation—of course, all this is hurried consideration; there may not be anything to it—but if the Southern Pacific had all the facilities in men, machinery, and investment, and so on—of course, some of them may be outside of the maintenance of equipment block (4126)—but if it has all those things to maintain its present equipment, and by reason of diverting this traffic some of its present equipment is made unnecessary, won't some of those items continue to go on as an expense whether this equipment is used or not?

A. I presume they will, and be some loss to the company in consequence until their traffic grows to a point to take that up and utilize it. I don't regard this as any—it certainly isn't any large proportion—of their total traffic, but to whatever extent that would operate it would, of course, constitute some loss to that carrier. I hardly think that would influence our 100 per cent variation with maintenance of equipment. That would be a temporary factor that might be sufficient to take it into account. It wouldn't influence the general principle of the increase of that cost in proportion to the

increase of business. You have here a case where you are going in the other direction, and it doesn't respond, it is true, quite as quickly there, and in some respects, of course, it may involve investment that can't be got rid of, but, in general, equipment—it would be possible either to dispose of it, or the increase of business on
2291 this road—which it is increasing—business would soon require that same equipment, find use for it. That would only be a temporary condition, I think. (4127.)

(The papers heretofore marked for identification "Complainant's Exhibits Nos. 119 to 129, both inclusive, Witness Newell," were thereupon received in evidence.)

Cross-examination:

Exhibits 127 and 128, which are the last two of the charts, are designed to show the relation between the density of traffic and the operating ratio. It is true that a railroad that is largely handling a low-grade commodity taking rates with a low margin of profit might have very great density of traffic and a high operating ratio that would present an entirely different situation, because of the low net earnings, as compared with a road that had a very much lighter density of traffic, operating under a rate structure where the earnings carried a very considerable profit. (4128.) There is not an element there that should be supplied in order to make a chart of this kind of any value. It isn't without value because it doesn't have value. If you were to undertake to compare any one of the roads in this chart with any other one you would have to take those things into account. I think it has value; when you take, as this does, all the Class I roads of the country and put them into a chart, this has some significance. I don't mean that one could determine from this what the particular ratio is, but I think it is indicative of a very close relationship between the total operating expense and the total amount of traffic. That is the only purpose for which it is introduced.

As to my reference to Mr. C. E. Day's testimony, stating that he took into consideration minor fluctuations from month to month, in the particular instances he cited, that is what he did.
2292 I think Mr. Day stated those were minor fluctuations. I so understood him. He didn't speak of them as indicating very large differences. They were merely the seasonal differences, as I understood him, that occur—— (4129.)

Q. Well, don't you know that there are very marked fluctuations between brief periods?

A. I know that they are minor at least from the standpoint of time.

Q. (By Mr. SPENCER.) Mr. Newell, your Exhibit 16, where you are analyzing operations via Roseville and via the proposed cross-State line, proposes division to the Southern Pacific on the eastbound business, going east of Granger, I assume, of 17 per cent.

A. That was for that first three-year period, yes. When the Alturas line came in I increased it to 27 per cent. By Exhibit 129 I increase it to between 36 and 37 per cent. That is to apply on all western Oregon business destined east.

Q. And yet, as I understand you, you say that the present division of 25 per cent accorded to the Southern Pacific lines on business moving through the Portland gateway is so (4130) excessive and unreasonable that it isn't attractive to the Oregon-Washington Railroad & Navigation Company and Union Pacific lines?

A. That I haven't had an opportunity to consider—at least, I hadn't thought of it since this matter of Mr. Burckhalter's testimony came in. I don't know whether his statements as regards the empties will be applicable there. Perhaps it would. That, of course, would change that consideration, and I haven't attempted to work that out. I don't know what the condition would be if we are to suppose that the Southern Pacific takes on the burden of the empty car haul and leaves the Union without any; that would change that situation.

Q. Well, you know, as a matter of observation and expe-
2293 rience over a long number of years, and from your own relations with the O. R. & N. in the early days when it had all of this western Oregon business eastbound, that the Union Pacific furnished a big end of the cars through the Portland gateway, and that is the way it would be operated, wouldn't it?

A. Well, I suppose that is true. I have no knowledge of it myself.

Q. You don't assume for one moment that if the Southern Pacific were turning over western Oregon business in the volume your study contemplates that the Southern Pacific would bring in all of the empty cars to move the business, short hauling itself, do you? They would call on the Union Pacific to furnish the cars (4131) through the Portland gateway, wouldn't they?

A. Well, I assume that is the fact. I thought you were asking the question now in view of the fact that Mr. Burckhalter testified——

Q. No; I am just wanting to call your attention to these divisions, which you more than double, from your 17 per cent up to your 37 per cent——

A. Well, that is for another reason entirely, there.

Q. Well, I know, but it is the same—whatever the reasons may be, the financial distribution and the effect on the carriers involved would be progressively to the advantage of one and to the disadvantage of the other, whether you increase them or decrease them; that is true, isn't it? If you increase the division to the Southern Pacific on the traffic, the result would be to the advantage of the Southern Pacific, wouldn't it? That is what it is done for.

A. Sure. In this particular case. I have increased it in accordance with a statement which if true would show a larger burden
of cost to be borne by the Southern Pacific, that is, the
2294 entirely empty car haul.

Q. But if you increased them to any such proportion as that, wouldn't it obviously induce the Union Pacific system lines to take it through the Portland gateway?

A. I don't know what the reason is for the Portland situation. Now, as far as Mr. Burckhalter's statement is concerned, I (4132) haven't attempted a calculation to see what effect that would have. When I made the other statement it was the expectation that the burden of producing empty cars would be borne as much by the Union as by the Southern. That would be the ordinary treatment as between the carriers. Now, if that is to be introduced there and the Southern Pacific is to bear on the exchange at Portland the entire cost of furnishing the empties, leaving no such burden on the Union, that changes the situation. I am not sure how that would stand until I would try to work that out.

Q. Well, the furnishing of cars by a carrier where it takes all the business by its long haul, even to the Southern Pacific in this instance from Portland and from north and west of Portland, wouldn't be a measure to go by if the traffic was to be diverted to another carrier which was to participate in the haul, would it? If the Union Pacific was brought into the operation and would take this traffic, by every precedent and experience it would be compelled to furnish its quota of cars, wouldn't it?

A. That was my assumption, yes. That is my assumption in the first place.

Exam. ROGERS. Then if the Union Pacific brought the cars (4133) in, and instead of utilizing the empty cars in Oregon
2295 Southern Pacific was compelled to haul them back, wouldn't that be another consideration in calculating a saving to the Union Pacific?

A. Yes; if that arose out of it, if that was made necessary by this, but I take it for granted that the two carriers would meet each other on mutually beneficial terms and take account of that situation. It would be foolish to compel the Union to haul empty cars out here if the Southern at the same time could furnish them at less cost. That would come back to my exhibits put in this morning; if that be the true picture of the thing, it is on that basis that the whole matter should be considered, if that is a permanent situation.

Exam. ROGERS. Now, if it goes to the relation of the expense you talk about if the Union Pacific furnish the cars, then in calculating the saving to the Southern Pacific on the basis that the Union Pacific is bring in the cars, wouldn't you have to give consideration to this empties proposition down in California?

A. You would, yes. (4134.)

Colloquy

Mr. ELLIS. We have no more witnesses. We have prepared the data introduced by Mr. Wiggins in the form that Examiner Rogers suggested, merely compiling it in the three groups by years as the

examiner suggested the other day, but they are not completely typed, they are in the course of typing now, and we would like the privilege of furnishing those for the record. There is no new information—simply put together in slightly different form. That is the tonnage and revenue estimates used by Mr. Wiggins, recompiled along the lines of the suggestion of Examiner Rogers, in three groups—one the traffic to and from the central Oregon territory, one the Idaho traffic, and one the traffic to and from western Oregon. The typing will be completed probably within the next hour.

2296 Mr. SPENCER. Well, as far as we are concerned, if you (4135) don't have the exhibits they can be given exhibit numbers now and furnished later.

(Said statement was thereupon received in evidence marked "Complainant's Exhibit No. 130, Witness Wiggins.")

Mr. ELLIS. We desire to introduce at this time by reference Exhibit No. 50 in docket 14392, pages 989 to 994, inclusive, which is Mr. George W. Buck's estimate of cost of constructing the cross-State line as introduced at that time, together with his testimony, pages 989 to 994, inclusive, in explanation of that estimate. (4136.)

Mr. ELLIS. I would like, also, to introduce the testimony of A. R. Olsen in docket 14392, which embraces pages 335 to 374, inclusive. The carriers have introduced a part of this and I merely want the entire testimony in the record.

Comr. MCMANAMY. That will be received.

Mr. ELLIS. I also desire to introduce as an exhibit a pamphlet published by the Chicago, Burlington & Quincy Railroad, Great Northern Railway, and Northern Pacific Railway, entitled "Timber Billions of the Pacific Northwest." I have been (4137) unable to get extra copies of these, although I have made every opportunity to get them from every available source around Portland during the past 10 days.

Comr. MCMANAMY. What is the purpose of that, Mr. Ellis?

Mr. ELLIS. The purpose is to call attention to the viewpoint of the carriers and their beliefs and their statements as to the——

Comr. MCMANAMY. You are not going to try to find these carriers by something the Burlington put out, are you?

2297 Mr. ELLIS. The Great Northern and Northern Pacific are parties to this case, and this contains information directly in rebuttal to the claims of carriers in their testimony here as to what there was in the way of resources in the State of Oregon.

Mr. SPENCER. Well, I think that if we are to be bound by anything that the other railroads have published, why, we should have opportunity to examine them with respect to it—a lot of flamboyant literature here that——

Mr. ELLIS. I intend to be entirely impartial, Mr. Spencer—I have some of the Union Pacific here.

Mr. DEY. Well, what testimony of ours, of the defendants, do you claim to impeach by these pamphlets?

Mr. SPENCER. Wherein is this rebuttal, in other words?

Mr. ELLIS. I wouldn't call this impeaching testimony (4138), necessarily. It is, though, rebuttal in that it contains a great deal of information on the timber stands of the Pacific Northwest and of the entire United States, as adopted and published by the carriers themselves, and it is circulated and broadcast throughout the country.

Mr. MCCULLOCH. Not only that, but it does contain information put out over the names of two of the defendants in this case directly contradicting evidence that has been offered by the defendants here to the effect that the production of lumber in the Pacific Northwest as compared with the production of lumber in other sections of the United States is not increasing, and will not increase, within a reasonable period of time, as we have claimed, in order to supply the consumption demands in the United States, and it is strictly rebuttal in that sense.

Mr. SPENCER. It should be called to the attention of the roads purporting to be authors of the publication, and it hasn't
2298 been called to the attention of any of these defendants, and it isn't established as authoritative by any witness, and it certainly hasn't any place here as substantive testimony, or as rebuttal testimony.

Comr. MCMANAMY. What do the pamphlets consist of, Mr. Ellis? That is; who prepared them? Whose are they?

Mr. ELLIS. The one I have referred to is prepared by the Chicago, Burlington and Quincy, the Great Northern Railway Company, and the Northern Pacific. (4139.)

Mr. MCCULLOCH. Let the commissioner see it.

(Mr. Ellis here handed said pamphlet to Commissioner McManamy.)

Mr. SPENCER. As bad as the Saturday Evening Post. The dates seem to be 1923. I don't know——

Mr. DEY. A lot of water over the dam since then.

Comr. MCMANAMY. I don't see much difference between this and the opinions of chambers and commerce and others that have been received in evidence. This will be received.

(Said pamphlet was thereupon received in evidence, marked "Complainant's Exhibit No. 131.")

Mr. ELLIS. I also offer in evidence at this time pamphlet entitled "Oregon for the Settler, Southern Pacific," which contains an elaborate summary of the resources of the State of Oregon, and describes Oregon as "the one uncut melon of the western world."

Comr. MCMANAMY. Mr. Ellis, we can not accept as evidence and as exhibits in this case the various advertising pamphlets that may be gotten out by these carriers over a long period of time. I am trying to be liberal in this respect.

Mr. SPENCER. It seems to me that is just what is being accomplished right now in a very effective way, Mr. Commissioner.

2299 Exam. ROGERS. Well, do the carriers dispute what is in these pamphlets? Take, for instance, this, the Southern Pacific's, do you dispute the correctness of that, Mr. Dey? (4140.)

Mr. DEY. I don't know what's in it, what data is there, or what the source of it is.

Exam. ROGERS. Well, it was put out by the Southern Pacific. Do you dispute the correctness of it at the time it was put out? If you do, why, what kind of information are you handing out to the public?

Mr. DAY. Whoever prepared it may have had erroneous data. It may have been a matter of opinion by some advertising man in the passenger department. We couldn't be bound by that, in the event he was in error.

Mr. MCCULLOCH. Well, certainly on the principle that admissions against interest are always admissible it seems to me pamphlets of this kind are admissible, and it ought not to be assumed that the defendants in this case will represent one thing to the public and another thing to the Interstate Commerce Commission.

Mr. SPENCER. Well, you are doing the same thing down here with the Portland Chamber of Commerce—telling the world to keep out of the desert country here, and then having them come up here and picture it as a paradise of production.

Exam. ROGERS. Well, what was done with that information of the chamber of commerce? Wasn't it admitted?

Mr. SPENCER. It was current data gotten out and circulated and put in at an appropriate time, but here is data here with respect to the entire Oregon country published by different carriers, bearing no dates as to time, except the first one (4141) offered appearing under date of 1923.

Mr. MCCULLOCH. However, they are being currently distributed to the public.

2300 Mr. SPENCER. No one here to analyze——

Mr. MCCULLOCH. I would like to suggest that the one just offered was offered and received in the previous hearing in this case. Its accuracy and reliability is vouched for by the president of the Oregon Agricultural College, W. J. Kerr.

Mr. SPENCER. In the previous case?

Mr. MCCULLOCH. Yes.

Comr. MCMANAMY. It will be received.

(Said pamphlet was thereupon received in evidence, marked "Complainant's Exhibit No. 132.")

Mr. ELLIS. I would like to introduce a similar compilation entitled "Oregon," issued by the agricultural department, Union Pacific system, at Omaha, Nebraska.

Comr. MCMANAMY. Is there a date?

Mr. MCCULLOCH. I don't think there is, Mr. Commissioner, but this pamphlet, I know, is being currently distributed to the public.

Comr. McMANAMY. It will be received.

(Said pamphlet was thereupon received in evidence (4142), marked "Complainant's Exhibit No. 133.")

Mr. ELLIS. I also introduce a "Map of Oregon, with a brief description of its resources, development, topography, and climate," published by the Southern Pacific Company. I find no date, except that it is marked "Copyright, 1923, by Southern Pacific Company."

(Said map was thereupon received in evidence and marked "Complainant's Exhibit No. 134.")

Mr. ELLIS. That concludes our case.

Mr. DEY. Now, Mr. Commissioner, the exhibit that I mentioned at the close of the hearing yesterday I now ask to introduce as a part of Mr. Mulchay's testimony. It requires no explanation.

(Said statement was thereupon received in evidence, marked "Defendant's Exhibit 135, Witness Mulchay.")

2301 Comr. McMANAMY. I would like to ask Mr. Mulchay one question.

J. H. MULCAHY was thereupon recalled as a witness, and (4143), having previously been duly sworn, testified as follows:

I am familiar with the divisions received on broccoli shipped through the Portland gateway. It represents the same percentage of through rates that divisions on other commodities receive, 30 per cent—30 per cent of the through rate or proportion of the through rate accruing west of the Missouri River. The 25 per cent that has been mentioned applies to lumber, 30 per cent applies to other traffic on the main line, and 40 per cent on the branches. The local rate is the maximum on everything except lumber. We have never given any consideration to which way the Southern Pacific got the most money finally out of this broccoli, whether it was through Portland or through Roseville. (4144.) Because we take it in the general, every-day business. We don't attempt to segregate any business.

As to whether I ever expressed myself as to whether we could have made more money for the Southern Pacific taking it through Portland than through Roseville, I don't know that I ever have, in the sense of making more money by carrying it by Portland than via Roseville, in that sense.

Exam. ROGERS. Including the icing stations and the haul and the terminals it has to go through, and all that—you never have expressed yourself on that?

A. Not exactly in the sense that we would make more money through the Portland gateway. My attitude has been that the traffic today pays very little revenue, and perhaps the 30 per cent of the through rate was just as valuable to us via Portland as it would be by hauling it via Ogden. I got from the question that you had the idea that I can separate the traffic moving one way or the

2302 other. (4145.) I don't pretend to give any testimony in this case as to what it costs to move it one way as against the other.

Comr. McMANAMY. That is all, Mr. Mulchay.

(Witness excused.) (4146.)

Comr. McMANAMY. Briefs will be due November 15th.

(Whereupon, at 11.30 o'clock a. m., August 25, 1928, the hearing in the above entitled matter was closed.) (4147.)

The foregoing pages numbered from 1 to 2302 comprise the narrative statement of the evidence and pursuant to stipulation filed herein is now settled, as the statement of the evidence in accordance with the rules of the court.

Dated, February 8, 1932.

JOHN H. McNARY,
U. S. District Judge.

2303 In United States District Court for the District of Oregon

In equity, No. E–9113

OREGON–WASHINGTON RAILROAD & NAVIGATION COMPANY, PETITIONER

v.

UNITED STATES OF AMERICA, DEFENDANT, and INTERSTATE COMMERCE Commission, Public Utilities Commissioner of Oregon (Successor of Public Service Commission of Oregon), and Public Utilities Commission of the State of Idaho, intervening defendants

Order approving statement of evidence, etc.

Feb. 8, 1932

It appearing that a condensed statement in narrative form of the evidence taken before the Interstate Commerce Commission has been prepared from petitioner's Exhibit No. 2 introduced in evidence in this court upon the trial of this cause, and that said statement has been lodged with the clerk of this court, and that by stipulation entitled "Stipulation re Statement of Evidence," filed in this court on the 6th day of February, 1932, the parties to said stipulation have approved said condensed statement of evidence and agreed that same may be substituted for said petitioner's Exhibit 2 on the appeal of this cause to the Supreme Court of the United States;

And it further appearing, in the opinion of the presiding judge of this court, that it will be necessary and proper that the following original papers introduced in evidence in this court upon the trial of this cause, to wit: Petitioner's Exhibits 1 and 3 to 9, inclusive, and defendants' Exhibits A, B, C, D, and E, be inspected in the Supreme Court of the United States upon the appeal thereof.

2304 It is therefore ordered that said condensed statement in narrative form so prepared from petitioner's Exhibit 2 be and the

same is hereby approved and substituted for said petitioner's Exhibit 2 and made a part of the record on appeal in this cause, and the original thereof shall be transmitted by the clerk of this court to the clerk of the Supreme Court of the United States instead of a transcript thereof.

It is further ordered that petitioner's Exhibits 1, 3, 4, 5, 6, 7, 8, and 9 and defendants' Exhibits A, B, C, D, and E, and each and all thereof be and the same are hereby made a part of the record in this cause upon appeal thereof to the Supreme Court of the United States and said original exhibits shall be transmitted by the clerk of this court to the clerk of the Supreme Court of the United States along with the transcript herein, for the consideration of the Supreme Court as a part of the record on appeal herein.

The aforesaid exhibits, namely, petitioner's Exhibits 1 to 9, inclusive, and defendants' Exhibits A, B, C, D, and E contain all the evidence submitted to this court on the hearings of this cause.

Dated this 8th day of February, 1932.

JOHN H. MCNARY,
United States District Judge.

[File indorsement omitted.]

2305 *Exhibit No. 1—Witness Wm. L. Teutsch*

I. C. C. docket No. 19680

Before the Interstate Commerce Commission

PUBLIC SERVICE COMMISSION OF OREGON

vs.

CENTRAL PACIFIC RAILWAY COMPANY ET AL.

I. C. C. docket No. 19680

OREGON AGRICULTURAL SUMMARIES, BY COUNTIES

Exhibit of the Public Service Commission of Oregon

By Wm. L. Teutsch, asst. county agent leader, Oregon Agricultural College, Corvallis, Oregon

2306 MALHEUR COUNTY

Estimate of present agricultural tonnage available for movement over proposed cross-State railway, westbound

	Tons	Cars		Tons	Cars
Sheep	1,843	184	Dressed poultry	30	2
Cattle	4,723	378	Apples	2,346	138
Hogs	786	79	Potatoes	3,182	174
Butter	472	31			
Horses	308	28	Total present tonnage available for cross-State line	23,050	1,241
Wheat	9,410	227			

Irrigated lands in Malheur County

	Acres
From the waters of the Malheur River	35,732
From the waters of Cottonwood Creek	173
From the waters of Willow Creek	27,602
From the waters of Owyhee River	34,500
Big Bend irrigation district	5,000
Park unit Big Bend irrigation district	2,800
Jordan Valley irrigation district (settled up)	1,500
Kingman Kolony irrigation district	1,200
Ontario-Nyssa irrigation district	5,000
Payette-Oregon Slope	5,300
Total irrigated area	118,807

New reclamation projects now in the process of construction or constructed and under development

	Acres
Owyhee project	80,960
Vale Project	24,780
Jordan Valley project	9,500
Warm Springs project	4,000
2307 Westfall irrigation project	4,050
Total new lands to be irrigated	123,290
Lands that will receive a supplemental supply of water	58,600

Lands to be brought under irrigation

1. FROM THE OWYHEE PROJECT—ESTIMATED UTILIZATION OF THE LAND TO BE IRRIGATED

	Per cent	Acres		Per cent	Acres
Alfalfa	32.5	26,312	Barley	12.5	10,120
Clover seed	10.0	8,096	Potatoes	5.0	4,048
Pasture	10.0	8,096	Buildings, etc	2.5	2,024
Wheat	20.0	16,192			
Corn	7.5	6,072		100.	80,960

Tonnage estimated from the land to be irrigated by Owyhee projects

1. NEW LANDS

	Tons	Cars
Beef cattle	1,516	121
Lambs	2,922	292
Hogs	3,000	300
Butter	1,475	98
Potatoes	12,600	700
Wheat	16,192	300
Total from new lands	37,707	1,901

2. ADDITIONAL WATER FOR OLD LANDS WILL INCREASE PRESENT TONNAGE AS FOLLOWS

Sheep	460	46
Hogs	196	19
Butter	118	8
Wheat	2,352	56
Potatoes	783	42
Total from additional water on old lands	3,909	171
Grand total from Owyhee	41,616	2,072

2308 3. FROM THE VALE PROJECT

ESTIMATED UTILIZATION OF THE LAND TO BE IRRIGATED

	Per cent	Acres		Per cent	Acres
Alfalfa	32.5	8,053.5	Barley	12.5	3,097.5
Clover seed	10.0	2,478.0	Potatoes	5.0	1,239.0
Pasture	10.0	2,478.0	Buildings, etc	2.5	619.5
Wheat	20.0	4,956.0			
Corn	7.5	1,858.5		100.	24,780

TONNAGE ESTIMATED FROM THE LAND TO BE IRRIGATED BY THE VALE PROJECT

	Tons	Cars
Beef cattle	330	28
Alfalfa	11,013	734
Hogs	977	98
Butter	457	30
Potatoes	6,938	231
Wheat	4,647	112
Total from the Vale project	24,362	1,233

Tonnage estimated from the land to be irrigated by Owyhee projects—Continued

4. BY THE JORDAN VALLEY PROJECT—TONNAGE ESTIMATED FROM THE LAND TO BE IRRIGATED

	Tons	Cars
Cattle	593	48
Sheep	594	60
Total	1,187	108

5. TONNAGE ESTIMATED FROM THE LAND TO BE IRRIGATED BY THE WARM SPRINGS PROJECT

	Tons	Cars
Wheat	2,100	50
Barley	2,400	80
Total	4,500	130

2309

6. FROM WESTFALL PROJECT

ESTIMATED UTILIZATION OF THE LAND TO BE IRRIGATED

Crop	Per cent	Crop	
Alfalfa	32.5	Wheat	25.0
Clover	10.0	Corn	7.5
Pasture	10.0	Buildings, etc	2.0
Barley	12.5		

TONNAGE ESTIMATED FROM THE LAND TO BE IRRIGATED BY THE WESTFALL PROJECT

	Tons	Cars
Hogs	150	15
Alfalfa	3,014	200
Butter	147	10
Wheat	912	22
Total	4,223	247

Summary of Malheur County tonnage

	Tons	Cars
Present tonnage	23,050	1,241
Additional available within five years	11,531	659
Total within five years	34,581	1,900
Additional potential tonnage within next few years	64,357	3,274
Total to be available	98,938	5,174

2310

HARNEY COUNTY

Irrigable lands in Harney County

	Acres
From the waters of the Silvies River	87,566
From the waters of Trout Creek	4,253
From the Middle Fork, Malheur River	11,215
From the waters of Silver Creek	23,669
From the waters of Blitzen River and tributaries	80,000
From the waters of East Slope Steins Mt. Watershed	11,900
Total	218,603

Estimate of present agricultural tonnage available for movement over proposed cross-State railway, westbound

	Tons	Cars
Sheep	870	90
Cattle	5,902	472
Hogs	269	27
Wheat	1,530	357
Horses	203	20
Total present tonnage available for cross-State line	8,801	930

Potential tonnage for cross-State line

1. FROM DIVISION OF LARGE HOLDINGS WITH ADEQUATE IRRIGATION WORKS

(A) AVAILABLE ACREAGE, 490,206

(B) ESTIMATED UTILIZATION OF THE LAND TO BE DIVIDED AND IRRIGATED

	Per cent
Alfalfa	30
Pasture	30
Wheat	13
Barley	20
Buildings	5
Total	100

1311 TONNAGE ESTIMATED FROM THE LAND TO BE DIVIDED AND IRRIGATED

	Tons	Cars
Cattle	720	60
Sheep	480	48
Hogs	542	54
Barley & oats	2,110	70
Wheat	5,400	150
Total	9,252	382

2. FROM PROJECTS REQUIRING CONSTRUCTION OF IRRIGATION WORKS PRONOUNCED FEASIBLE BY U. S. RECLAMATION ENGINEERS

	Tons	Cars		Tons	Cars
(a) The Harney project:			(b) The Silver Creek project:		
Cattle	980	80	Cattle	916	18
Sheep	640	64	Sheep	108	11
Hogs	722	72	Hogs	122	13
Barley & oats	2,813	93	Barley & oats	562	18
Wheat	7,200	170	Wheat	1,440	35
Total	12,355	479	Total	2,428	95

Summary of Harney County tonnage

	Tons	Cars
Present tonnage	8,801	930
Additional available within five yrs	3,700	184
Total within five years	12,501	794
Additional tonnage to be available upon complete development	20,335	769
Total tonnage upon development	32,836	1,563

2312 *Seven-year average yield of crops grown at Harney branch experiment station, 1920–1927*

Crop	Average water used	Bushels or tons per acre harvested	Yields used in tonnage est.[1]
Federation spring wheat	12 acre-inches	51.9 bus	30 bus.
Hybrid 128 winter wheat	12 " "	41.6 "	30 "
Swedish select spring oats	12 " "	70.6 "	65 "
Trebi barley	12 " "	56.8 "	40 "
Grimm alfalfa	15 to 18 "	7.25 "	3 tons.
Canadian field peas	15 acre "	35.3 "	
		3.6 tons hay	
Sunflowers for silage	30 " "	40.9 tons	

[1] Conservative nature of yields used in making tonnage estimates is apparent when compared with actual yields obtained on the experiment station, the soil of which is classed average to poor.

Harney county ownership of land

	Acres
Eastern Oregon Livestock Company	140, 000
Pacific Livestock Company	120, 000
Oregon Western Colonization Company	190, 106
Wm. Hanley Company	28, 000
Harney Valley Improvement Co	12, 000
Total	490, 106

2313 *Development possible through irrigation from water pumped from deep wells—Summary of cost of establishing plant*

Cost of drilling and casing 18-in. well	$205. 00
" " casing well 60 feet	225. 20
" " turbine pump for 18-in. well	735. 93
" " installing test pump and testing well	63. 59
" " " Kimball turbine pump	35. 24
" " engine to operate pump	1, 582. 60
" " installing concrete floor and engine base	180. 05
" " " 25 H. P. Y oil engine	107. 47
" " " cooling system for engine	162. 90
" " constructing pump house	290. 53
" " weir box, turnouts, and flume	131. 73
Total	3, 720. 24

Summary of cost of producing Federation wheat and Grimm alfalfa on 19.4 acres with pumped water during 1927

No.	Operation	Man-hrs.	Horse-hrs.	Mac.-hrs.	Tractor-hrs.	Miscellaneous	Total
1	Discing	10. 5		10. 5	10. 5		$7. 98
2	Harrowing	9. 75	3. 5	9. 7	8. 5		7. 35
3	Rolling	12. 0	24. 0	12. 0			7. 39
4	Bordering	18. 0	.5	8. 5	8. 5		10. 67
5	Fert	4. 5	9. 0	4. 5		1300lb fert., $29.38	32. 56
6	Seeding	15. 5	31. 0	15. 5		2108lb seed, $63.24	73. 54
7	Ditching	69. 88	112. 33	40. 33		($36.00 perm. imp.)	3. 63
8	Irrigating	20. 75		10. 75			11. 51
9	Harvesting	68. 75	85. 0	40. 25		15£ twine, $3.00	41. 70
10	Threshing	87. 5	38. 5	32. 25	20. 25	Separator, $9.07	57. 77
11	Cleaning	132. 75		40. 25			60. 14
12	Tri. wheat	6. 0				Copper carb., $1.95	4. 65
13	Int. & taxes						77. 79
	Total						396. 68

(Table to be inserted)

Operating expenses per day

1. Labor—1 man for 3 hours each day to lubricate, fuel, and start engine, at 45¢	$1.35
2. Fuel—1.3 gallons per hr., at .1586—12 hours	1.9032
3. Lubrication—.079 gallons per hr., at .0438—12 hrs	.5256
Total cost per day	3.7788

2314 *Operating expenses, interest, & depreciation for 1927 season, when 31 acres were irrigated*

1. Labor—62.81 hours, at 45¢	$28.26
2. Fuel—322.5 gallons, at 12.2¢	39.34
3. Lubrication—19 gallons, at 55.5¢	10.55
4. Interest and depreciation on plant, int. at 5% depreciation on pump, and engine 10%	173.31
Total cost of water for 31 acres	251.46
Water cost per acre	$8.11
" " " " foot	7.05
" " " " inch	.58

2315 NORTHERN LAKE COUNTY

Estimate of present agricultural tonnage available for movement over proposed cross-State railway

	Tons	Cars
Sheep (east)	773	86
Wool (east)	206	14
Beef cattle (west)	1,049	84
Horses (west)	275	23
Cream, hogs, miscellaneous products	73	4
Total present tonnage available for cross-State line	2,376	213

Potential tonnage for cross-State line from development of:

(a) Summer Lake irrigation district consisting of	5,000 acres.
(b) Silver Lake irrigation project consisting of	6,500 acres.
(c) Fort Rock and Christmas Lake Valleys consisting of 20% of 230,000 acres	46,000 acres.

(d) Estimated utilization of the land to be developed and irrigated:

	Per cent
Alfalfa	40
Wheat	25
Clover or alfalfa seed	10
Pasture	10
Barley and oats	8
Potatoes	2
Farm buildings, etc	5

Tonnage estimated from the land to be irrigated and developed

	Tons	Cars		Tons	Cars
Beef cattle	1,551	124	Potatoes	4,305	239
Cream	1,916	127	Hogs, sheep	621	62
Wheat	8,619	208			
Clover or alfalfa seed	317	34	Total	17,329	794

2316 *Summary of Northern Lake County tonnage*

	Tons	Cars
Present tonnage	2,376	213
Additional available within five years	1,752	79
Total within five years	4,128	292
Additional potential tonnage within next few years	15,777	726
Total tonnage to be available	19,905	1,018

2317 KLAMATH COUNTY

	Tons	Cars
Estimate of present agricultural tonnage available for movement over proposed cross-State railway:		
Sheep (east)	357	35
Wool (east)	136	9
Total present tonnage available for cross-State line	493	44
Potential tonnage for cross-State line:		
Clover seed	240	16
Summary:		
Total Klamath tonnage to be available within five years—		
Present tonnage	493	44
Within five years	240	16
Total within five years	733	60

2318 DESCHUTES, CROOK, JEFFERSON, & WHEELER COUNTIES

	Tons	Cars
Estimate of present agricultural tonnage available for movement over proposed cross-State railway:		
Sheep	1,838	209
Sheep for breeding	1,000	100
Clover seed	50	3
Wool	599	40
Total present tonnage	3,487	352
Potential tonnage for cross-State line:		
Clover seed	250	15
Summary:		
Total tonnage to be available after five years:		
Present tonnage	3,487	352
Increase during next five years	250	15
Total tonnage after five years	3,737	367

2319 GRANT COUNTY

	Tons	Cars
Estimate of present agricultural tonnage available for movement over proposed cross-State railway:		
Cattle	1,720	137
Sheep	224	22
Total	1,944	159
Potential tonnage:		
Cattle and sheep	486	40
Summary:		
Total tonnage to be available after five years:		
Present tonnage	1,944	159
Potential tonnage	486	40
Total tonnage after five years	2,430	199

Baker County

	Tons	Cars
Butter	500	33

2320

Lane County

	Tons	Cars
Estimate of present agricultural tonnage available for movement over proposed cross-State railway:		
Clover seed	45	3
Apples	255	15
Pears	315	21
Dried prunes	737	26
Green prunes	84	5
Walnuts and filberts	85	6
Canned fruits and vegetables	3,243	116
Eggs	2,370	169
Corn	13,475	385
Alfalfa hay	600	40
Dairy stock	700	98
Feed (excluding corn)	4,075	163
Total tonnage available now	25,984	1,018
Potential tonnage for cross-State line:		
Pears	157	10
Prunes (dried)	110	4
Walnuts and filberts	170	11
Canned fruits and vegetables	1,621	58
Corn	13,475	385
Alfalfa hay	60	4
Feed	815	33
Eggs	2,370	169
Total potential tonnage within five yrs	18,778	674
Summary:		
Total present tonnage	25,984	1,018
Additional available within five years	18,778	674
Total available within five years	44,762	1,692

2321

Douglas County

	Tons	Cars
Estimate of present agricultural tonnage available for movement over proposed cross-State railroad:		
Apples	840	56
Pears	525	35
Dried prunes	2,650	96
Green prunes	550	20
Fresh cherries	30	2
Canned fruits and vegetables	1,272	45
Broccoli	4,190	41
Turkeys	90	1
Mixed feed grains	3,870	15
Potatoes	630	35
Hay	1,000	66
Total present agricultural tonnage	15,647	909
Douglas County potential agricultural tonnage for proposed line:		
Pears	262	17
Dried prunes	397	13
Canned fruits and vegetables	636	23
Broccoli	4,190	419
Feed grains	1,935	77
Total potential tonnage	7,420	549
Summary of Douglas County agricultural tonnage:		
Present tonnage for cross-State road	15,647	909
Additional available within five years	7,420	549
Total within five years	23,067	1,518

2322 LINN COUNTY

	Tons	Cars
Estimate of present agricultural tonnage available for movement over proposed cross-State railroad:		
Clover seed	73	5
Rye grass	280	18
Apples	68	4
Pears	61	4
Dried prunes	694	25
Cherries	200	20
Strawberries	1,750	87
Walnuts	15	1
Canned fruits & vegetables	1,680	60
Feed grains & prepared feeds	2,500	100
Total present tonnage available	7,321	324
Potential agricultural tonnage:		
Pears	61	4
Dried prunes	103	4
Walnuts	15	1
Canned fruits & vegetables	840	30
Feed	500	20
Total potential tonnage	1,519	59
Summary:		
Present tonnage	7,321	324
Additional available within five years	1,519	59
Total within five years	8,840	383

2323 BENTON COUNTY

	Tons	Cars
Estimate of present agricultural tonnage available for movement over proposed cross-State railroad:		
Clover and vetch seed	31	2
Apples	1,450	85
Pears	180	12
Dried prunes	265	10
Canned fruits & vegetables	846	30
Feed (excluding corn)	2,500	100
Total present available tonnage	5,272	239
Potential tonnage:		
Pears	180	12
Dried prunes	20	1
Canned fruits & vegetables	211	8
Feed	180	7
Total potential tonnage	591	28
Summary:		
Present tonnage, estimated	5,272	239
Additional tonnage available within five years	591	28
Total available for cross-State railroad within five years	5,863	267

2324 LINCOLN COUNTY

	Tons	Cars
Estimate of present agricultural tonnage available for movement over proposed cross-State railroad:		
Alfalfa	1,752	116
Potential tonnage:		
Alfalfa	1,278	84
Summary:		
Present tonnage	1,752	116
Additional available within five years	1,278	84
Total within five years	3,030	200

2325 COOS AND CURRY COUNTIES

	Tons	Cars
Estimate of present agricultural tonnage available for movement over proposed cross-State railroad:		
Hay	7,210	480
Concentrate feeds (wheat, oats, barley)	2,234	89
Canned fruits and vegetables	107	3
Total	9,551	572
Potential agricultural tonnage for cross-State railroad:		
Hay	3,605	240
Broccoli	1,500	150
Lettuce	500	50
Canned fruits and vegetables	214	8
Concentrate dairy feeds	781	31
Total	6,600	479
Summary:		
Estimated present tonnage	9,551	572
Potential tonnage	6,600	479
Estimated tonnage available within five years	16,151	1,051

2326 JOSEPHINE COUNTY

	Tons	Cars
Estimate of present agricultural tonnage available for movement over proposed cross-State railroad:		
Mill feeds, oats, and barley	1,820	91
Potential tonnage when Butte Falls line is completed:		
Apples	437	26
Pears	945	65
Bulbs	600	40
Feed grains and mill feeds	1,100	55
Total	3,082	184
Summary:		
Present estimated tonnage	1,820	91
Potential tonnage within five years	3,082	184
Total	4,902	275
50% of total available tonnage to move via cross State when Butte Falls line is completed or	2,451	137

2327 JACKSON COUNTY

	Tons	Cars
Estimate of present agricultural tonnage available for movement over proposed cross-State railroad:		
Mill feeds, barley, and oats	1,500	80
Potential tonnage available if Butte Falls line is completed:		
Pears	45,520	3,038
Apples	4,290	286
Canned fruits	800	28
Dried apples and prunes	92	3
Total	50,702	3,355
Summary:		
Present tonnage	1,500	80
Potential tonnage within five years	50,702	3,355
Total	52,202	3,435
50% of this total tonnage available within five years if Butte Falls line is built	26,101	1,703

2328 SUMMARY OF AGRICULTURAL TONNAGE BY COUNTIES

County	Available now		Additional within five years		Additional after five years		Grand total	
	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars
Malheur	23,050	1,241	11,531	659	64,357	3,274	98,938	5,174
Harney	8,801	650	3,700	144	20,335	789	32,836	1,583
Northern Lake	2,376	213	1,752	79	15,777	726	19,905	1,018
Klamath	493	44	240	16			733	60
Deschutes, Crook, Jefferson, Wheeler	3,487	352	250	15			3,737	367
Grant	1,944	159	486	40			2,430	199
Baker	500	33					500	33
Lane	25,984	1,018	18,778	674			44,762	1,692
Douglas	15,647	969	7,420	549			23,067	1,516
Linn	7,321	324	1,519	59			8,840	383
Benton	5,272	239	591	28			5,863	267
Lincoln	1,752	116	1,278	84			3,030	200
Coos and Curry	9,551	572	6,600	479			16,151	1,051
Totals	106,178	5,928	54,145	2,826	100,469	4,789	260,792	13,543
Deducting hay and feed requirements of western Oregon figured as originating in Malheur, Harney, and Lake Counties							37,205	1,902
Net grand total							223,587	11,641

JOSEPHINE AND JACKSON COUNTY TONNAGE TO BE AVAILABLE IF BUTTE FALLS LINE IS CONSTRUCTED

Josephine	1,820	91	3,082	184			4,902	275
Jackson	1,500	50	50,702	3,356			52,202	3,406
Totals	Only 50% to cross-State road						57,104	3,681
Net total							28,552	1,840

2329 *Cannery growth in Oregon, 1919–1927*

Year	Fruits (cases)	Vegetables (cases)	Total	Year	Fruits (cases)	Vegetables (cases)	Total
1919	1,233,735	100,000	1,333,735	1926	3,201,403	463,901	3,655,304
1922	1,793,854	182,787	1,976,641	1927	2,508,245	406,910	2,915,155
1923	1,733,361	321,836	2,055,197	Per cent increase, 1919–1927	103%	300%	117%
1924	1,824,455	235,670	2,060,125				
1925	2,077,120	459,951	2,537,071				

Increase in number of farms shows progress toward diversification and points to development taking place in western Oregon territory to be benefited by proposed line.

County	Number farms, 1920	Number farms, 1925	Per cent increase, 1920–25	County	Number farms, 1920	Number farms, 1925	Per cent increase, 1920–25
Linn	3,041	3,308	8.7	Coos	1,178	1,273	8.0
Benton	1,320	1,369	3.7	Josephine	727	945	29.9
Lincoln	767	752	[1] 1.9	Jackson	1,720	2,142	24.5
Lane	3,279	4,168	24.0				
Douglas	2,275	2,551	12.1	Total	14,307	16,508	15.3

[1] Decrease

2330 This increase in the number of farms shows the tendency to subdivide large holdings devoted to grain, livestock production, and general farming, and to establish a more intensified production of small fruits, vegetables, nuts, and poultry, products which must be rushed to consuming centers 2,000 to 3,000 miles across the continent.

NOTE.—All these figures were taken from the United States census, 1920–1925.

Car-lot imports of corn into Oregon, by years, as per records of the State grain inspection department, Portland, Oregon

Year	Carloads	Tons
1924-25	505, @ 30	15,150
1925-26	782, @ 30	23,460
1926-27	963, @ 30	28,890

Car-lot shipments of perishable vegetables, exclusive of broccoli, from western Oregon by districts

Year	District north of Linn and Benton Counties	District, Linn, Benton Counties, and south	Per cent produced in district to be benefited by proposed road
1924	399	14	3%
1925	550	1	.1%
1926	752	9	1.1%
1927	703	5	.7%

Climatic and soil conditions are very similar in the upper Willamette Valley to those prevailing in the lower valley, where 97% to 99% of the perishable vegetables, exclusive of broccoli, are
2331 produced. Vegetables are grown in the upper valley at present but almost entirely for cannery purposes. A shorter route east would be of material advantage and should stimulate the production of perishables.

NOTE.—Broccoli excluded because it can not be successfully grown north of Douglas County. Vegetables listed include asparagus, cabbage, carrots, celery, lettuce, mixed vegetables, spinach, tomatoes.

Car-lot shipments of eggs from California, Washington, Oregon, 1926–1927

Year:	Carloads
CALIFORNIA	
1926	1,475
1927	1,787
WASHINGTON	
1926	1,346
1927	1,870

OREGON

Destination:	Carloads	Destination—Continued.	Carloads
Arizona	1	Nebraska	21
Florida	3	New Jersey	10
Georgia	1	New York	72
Illinois	78	North Carolina	1
Iowa	4	Pennsylvania	17
Michigan	192	Texas	1
Minnesota	2		
Missouri	1	1927 total	414
Montana	10	1926 total	310

2332 *Dairy cattle, poultry, hogs, and sheep in western Oregon, Linn County and south, 1926*

County	Dairy cows	Poultry [1]	Hogs	Sheep
Benton	5,900	98,515	4,590	32,000
Linn	14,365	269,270	16,965	72,475
Lincoln	4,675	22,739	1,705	2,510
Lane	13,510	275,366	13,125	40,250
Douglas	5,815	133,528	8,560	123,900
Coos	11,215	57,050	3,970	6,070
Curry	3,205	9,940	3,745	11,500
Josephine	2,530	36,624	2,470	2,120
Jackson	5,695	123,964	10,245	16,235
Total	66,910	1,026,996	65,375	307,060
Total for western Oregon	163,155	2,460,479	142,550	402,160
Per cent in district, Linn County and south	41%	41%	45%	73%

[1] Figures are from 1925 census.

MATERIAL SAVINGS WOULD ACCRUE TO LIVESTOCK SHIPPERS IN SOUTHERN IDAHO AND SOUTHEASTERN OREGON IN REACHING NORTHERN CALIFORNIA MARKETS

From Ontario, the center of the livestock-producing territory of the region, to San Francisco via the existing routes is approximately 1,328 miles, requiring three runs and two feeds if special stock train: otherwise, four runs and three feeds.

2333 I. Shrinkage and feed cost on a car of 1,000 pounds, eight cent, steers would be about as follows via proposed route:

2 feeds, @ $17.50	$35.00	
3½% shrinkage first 400 miles; 1% for each additional run, or 5½%	110.00	
Total cost		$145.00

II. Shrinkage and feed cost via proposed route would be as follows. The distance from Ontario to San Francisco would be approximately 817 miles, which could be made in two runs and one feed.

1 feed, @ $17.50	$17.50	
3½% shrinkage first run and 1% second run	90.00	
		$107.50
Saving per car		37.50

Saving on sheep and hogs would be somewhat greater.

2334 *Annual slaughter of livestock in Los Angeles and bay cities, 1915–1927*

Year	Cattle		Calves		Hogs		Sheep	
	San Francisco	Los Angeles	San Francisco	Los Angeles	San Francisco	Los Angeles	San Francisco	Los Angeles
1927	----------	310,385	----------	137,802	----------	542,889	----------	[1] 628,270
1926	232,894	300,518	75,617	148,596	386,408	450,764	[5] 805,148	[2] 625,847
1925	221,644	298,680	78,955	157,253	414,227	472,013	[6] 775,219	[3] 620,845
1924	209,710	285,854	87,956	136,833	502,982	602,801	[7] 910,216	[4] 715,660
1923	213,562	277,692	78,694	129,083	485,360	602,328	880,428	582,083
1922	210,240	229,944	82,882	97,693	417,379	424,617	926,326	540,263
1921	211,594	195,364	57,987	80,351	354,896	305,050	996,437	516,316
1920	----------	187,282	----------	66,744	----------	238,618	----------	411,820
1915	104,293	115,115	67,776	20,469	160,546	220,711	640,991	386,741

[1] Includes approximately 28,000 dressed lambs shipped to eastern markets.
[2] " " " 36,000 " " " " " " "
[3] " " " 50,000 " " " " " " "
[4] " " " 70,000 " " " " " " "
[5] Estimated 23,600 head lambs were shipped east dressed.
[6] " 25,000 " " " " " "
[7] " 125,350 " " " " " "

NOTE.—San Francisco figures include slaughter at Oakland, Butchertown, Sacramento, and South City.

2335 *Car-lot shipments of sheep into California, by years, giving States of origin, 1924–1926*

State	1924	1925	1926	State	1924	1925	1926
Arizona	288	869	1,062	Oregon	590	930	990
Colorado	----------	13	----------	Texas	----------	159	222
Idaho	632	490	329	Utah	993	422	439
Montana	----------	----------	15	Washington	30	18	10
Nevada	804	571	1,198				
New Mexico	----------	28	----------	Totals	3,337	3,500	4,211

Carloads hogs into California, by States, over all common carriers, 1922–1926

Year	State slaughter census manufacture	Total cars	Approximate number head	Year	State slaughter census manufacture	Total cars	Approximate number head
1922	----------	5,914	472,000	1926	----------	7,127	641,430
1923	1,187,767	7,908	711,720				
1924	----------	7,735	696,150	5-year average	----------	7,264	653,760
1925	981,665	7,636	686,430				

2336 *Hogs shipped into California, with State of origin, 1926*

State:	Total	State—Continued.	Total
Arizona	7	New Mexico	35
Arkansas	0	Oklahoma	153
Colorado	983	Oregon	3
Idaho	425	So. Dakota	6
Illinois	0	Texas	175
Iowa	2	Utah	241
Montana	2	Wyoming	41
Kansas	339	Washington	0
Missouri	52		
Nebraska	4,711	Total	7,189
Nevada	14		

Car-lot shipments of cattle into California, by years, giving States of origin, 1922–1926

State	1922	1923	1924	1925	1926	State	1922	1923	1924	1925	1926
Arizona	4,527	2,966	3,532	5,316	6,619	New Mexico	2,101	724	739	1,140	1,008
Canada			43			Oregon	1,170	1,357	1,305	1,314	1,427
Colorado	1,029	191	527	462	266	So. Dakota			13		
Idaho	724	734	1,659	1,455	1,632	Texas	1,358	875	1,013	981	1,160
Kansas	22		15			Utah	832	1,019	1,836	2,779	2,656
Mexico			68	23	165	Wyoming	417	257	280	422	453
Missouri	78		21			Washington		27		34	52
Montana	275	181	652	335	580						
Nebraska	51		14	33		Totals	14,416	10,467	14,184	17,509	19,170
Nevada	1,832	2,136	2,467	3,215	3,143						

2337 *Receipts of dressed poultry at Los Angeles, 1927*

State of origin	Pounds	Per cent, by States of origin	State of origin	Pounds	Per cent, by States of origin
California	1,399,924	25%	New Mexico	100,968	
Arizona	195,542		New York	41,430	
Colorado	202,789		Oklahoma	505,484	
Idaho	894,750	15%	Oregon	231,228	4%
Illinois	103,684		Texas	320,565	
Iowa	118,200		Utah	326,845	
Kansas	721,330		Vermont	155	
Kentucky	5,181		Washington	57,055	
Missouri	26,250				
Minnesota	24,276		Totals	5,597,579	100%
Montana	38,369		1926	4,946,586	
Nebraska	158,894		1925	4,800,802	
Nevada	124,660	[1] 55%			

[1] All other States.

2338 *Receipts of dressed poultry at San Francisco, 1927*

State of origin	Pounds	Per cent, by States of origin, 1927	State of origin	Pounds	Per cent, by States of origin, 1927
California	3,295,829	45%	Oregon	856,385	6.9%
Idaho	1,041,473	14%	Texas	49,984	
Illinois	52,295		Utah	23,875	
Iowa	124,850		Washington	785,343	
Kansas	256,560				[1] 34.2%
Minnesota	46,901				
Montana	101,644		Total	7,231,304	100.0%
Nebraska	296,851		1926 total	6,377,913	
Nevada	218,379		1925 "	5,614,804	
New York	32,674		1924 "	6,452,383	
Oklahoma	48,261				

[1] All other States.

Butter receipts at the San Francisco and Los Angeles markets for the year 1926, with points of origin

State of origin	Pounds	Per cent from each
California	42,712,000	58.8
Oregon	4,228,000	5.8
Idaho	14,292,000	19.6
Other States [1]	11,405,000	15.8
Totals	72,637,000	100.0

[1] States from which 15.8% of butter comes: Colorado, Minnesota, Texas, Washington, Wyoming,
2339 Iowa, Kansas, Missouri, Nebraska, New York, Pennsylvania, Wisconsin, Nevada, Montana, Utah.

Data shows that California is increasing its consumption of butter from outside States at the rate of 4.3% per year (1925–1926 figures), or by 2,960,000 pounds.

Authority: Butter Market Review, U. S. Bureau of Agricultural Economics.

Cheese receipts at San Francisco and Los Angeles markets for the year 1926, by States of origin

State of origin	Pounds	Per cent from each
California	4,693,000	16.7
Oregon	6,272,000	22.5
Idaho	7,299,000	26.5
Other States [1]	9,326,000	33.9
Totals	27,590,000	99.6

[1] Other States include Colorado, Illinois, Kentucky, Massachusetts, Michigan, Minnesota, Wisconsin, and West Virginia.

Receipts of cheese at San Francisco indicate that California is increasing the amount of cheese required from outside States at the rate of four per cent annually, or by approximately 1,000,000 pounds per year.

2340 *Car-lot unloads of fresh vegetables for years 1917–23 and 1926*

Year	New York	Chicago	Philadelphia	Year	New York	Chicago	Philadelphia
1917	8,702	3,267	2,836	1921	12,374	7,155	5,276
1918	10,509	4,223	3,834	1922	14,823	8,104	5,904
1919	10,275	5,732	4,132	1923	14,989	7,392	5,765
1920	11,033	6,068	4,600	1926	20,164	9,707	6,172

2341 *Exhibit No. 2—Witness Teutsch*

STATE OF OREGON

Year	No. establishments	No. wage earners	Value products	Year	No. establishments	No. wage earners	Value products
1904	1,602	18,523	$55,525,123	Portland:			
1909	2,246	28,750	93,004,845	1904	457	8,171	$28,651,000
1914	2,320	28,829	109,761,951	1909	649	12,214	46,561,000
1919	2,707	56,559	366,782,627	1914	837	11,273	55,807,000
1923	1,909	71,102	363,715,460	1919	846	26,813	196,380,148
Eugene:				1925	911	23,466	180,986,959
1914	37	238	810,000				
1919	52	534	2,490,000				

STATE OF CALIFORNIA

1904	6,839	120,040	$367,000,000	Los Angeles:			
1909	7,659	141,576	529,000,000	1909		17,327	$34,814,473
1914	10,057	176,547	712,000,000	1914		23,744	103,457,993
1919	11,942	296,858	1,981,000,000	1919		47,118	278,184,143
1923	9,920	305,987	2,215,000,000	1925 [1]		58,026	545,983,480

[1] Los Angeles C. of C.

2342 *Exhibit No. 5*

By Samuel L. Newton, witness for P. U. C. I.

I. C. C. docket No. 19680

Before the Interstate Commerce Commission

I. C. C. docket No. 19680

PUBLIC SERVICE COMMISSION OF OREGON
vs.
CENTRAL PACIFIC RAILWAY COMPANY ET AL.

Exhibit of the Public Utilities Commission of Idaho

VARIOUS STATISTICS AS TO FREIGHT MOVEMENT FROM REPORTS OF OREGON SHORT LINE RAILROAD COMPANY AND OTHER SOURCES AS SHOWN

2343 *Carload freight received at Huntington, Oregon, by the Oregon-Washington Railroad and Navigation Company from the Oregon Short Line Railroad Company*

Commodity	1921	1922	1923	1924	1925	1926	1927
Barley	30	41	25	194	61	21	32
Corn	519	524	247	445	623	1,004	935
Grain, other	101	91	100	49	35	108	5
Oats	87	431	49	17	53	22	38
Wheat	697	2,790	597	169	51	1,981	864
Flour	101	128	107	69	76	136	220
Mill products	78	119	89	106	137	87	118
Cement, brick, lime	138	191	249	257	312	206	303
Fruit, dried & evap	5	6	1	4	7	5	31
Fruits & vegts., can'd	11	73	42	14	190	124	224
Hay & straw	160	16	150	1		1	1
Merchandise	5,542	6,154	6,576	8,031	9,421	9,318	9,499
Ore and bullion	39	96	202	738	701	548	1,059
Salt	327	309	358	377	362	255	300
Sugar	56	13	28	64	66	48	60
Wool	235	111	87	106	179	139	115
Apples	10	6	55	6	18		25
Fruits, citrus	3	17	83	264	290	219	293
Fruits, dried, Calif	10	33	66	28	20	59	61
Fruit, other green	86	136	202	99	121	177	422
Packing-house products	164	221	148	184	211	257	173
Potatoes	41	212	50	545	182	56	115
Poultry and eggs	25	30	30	53	41	24	15
Vegetables, other	25	81	94	187	247	101	146
Cattle	2,094	2,293	2,348	2,556	2,188	1,940	1,869
Hogs	305	774	1,265	1,594	719	817	759
Horses	45	63	119	53	70	188	239
Other livestock	18	47	47	68	137	247	230
Sheep	208	224	263	119	111	208	137
Coal and coke	13,782	15,419	14,668	14,247	13,834	12,655	15,481
Gravel and sand, stone	40	4	41	45	18	15	16
Ice		4	69				
Lumber	136	204	383	241	179	229	219
Other forest products	2	3	1	6	2	2	3
Oil	377	1,017	555	793	660	405	515
Misc. commodities	6,113	6,755	9,179	8,150	8,353	9,013	7,755
Total	31,610	38,636	38,575	39,879	39,675	40,615	42,276
Increase, 1927 over 1921							10,666

2344 *Freight traffic movement, Oregon Short Line Railroad Company*

[Annual report on file with P. U. C. I. State commission Form A, steam. 1st line tonnage, 2nd line number of carloads]

Year	Originating on entire line	Originating in Idaho	Received from connections	Total movement	Year	Originating on entire line	Originating in Idaho	Received from connections	Total movement
1913	2,499,432		3,316,666	5,816,098	1923	4,190,411	2,542,810	5,438,808	9,629,219
1914	2,714,715	441,630	3,216,431	5,931,146		139,419	93,428	191,932	331,351
1915	2,521,749		2,980,664	5,502,413	1924	3,463,367	1,968,393	5,152,605	8,615,972
1916	3,244,362	1,463,827	4,942,472	8,186,833		119,486	75,545	181,224	300,710
1917	3,895,097	1,889,756	5,462,783	9,357,880	1925	4,034,538	2,387,638	5,528,612	9,563,150
1918	4,081,545	2,220,003	5,626,092	9,707,637		129,621	84,168	192,543	322,164
1919	3,768,647	2,172,522	5,489,838	9,258,485	1926	3,957,295	2,346,833	5,571,693	9,528,988
1920	4,117,075	2,402,941	6,649,016	10,766,091		130,152	84,719	198,333	328,485
	132,439	[1] 77,215	213,350	345,789	1927	3,919,678	2,354,588	5,723,016	9,642,694
1921	3,482,206	2,033,013	4,332,129	7,814,335		131,313	85,821	198,520	329,833
	109,668	[1] 65,921	144,724	254,392					
1922	3,425,941	2,085,885	5,106,367	8,532,308					
	113,941	75,294	166,211	280,152					

[1] Estimated.

2345 *San Francisco buys Idaho's products*

[Market News Service, United States Department of Agriculture, Bureau of Agricultural Economics cooperating with California Department of Agriculture]

1927		1927	
Eggs	6,594 cases.	Sheep and lambs	10 carloads.
Dressed poultry	1,041,473 pounds.	Apples	2 "
Butter	1,721,532 "	Onions	2 "
Cheese	3,330,898 "	Peaches	1 "
Cattle	184 carloads.	Potatoes	139 "
Hogs	356 "		

Other products shipped into San Francisco from other States, but not from Idaho

Cabbage	7 carloads.	Lettuce	7 carloads.
Celery	44 "	Peas	23 "
Cherries	1 "	Tomatoes	230 "
Cucumbers	3 "	Turnips	12 "

Idaho shipped out in 1927, but not to San Francisco

Cabbage	16 carloads.	Lettuce	477 carloads.
Celery	32 "	Pears	19 "
Cherries	121 "	Tomatoes	6 "
Cucumbers	none.	Turnips	2 "

2346 *Shipments from ten southwestern Idaho counties*

[Adams County is included with Washington County. Shipping point, Weiser]

Year	Ada Co.	Boise Co.	Elmore Co.	Canyon Co.	Gem Co.	Owyhee Co.	Payette Co.	Valley Co.	Washington Co.	Totals
1921	1,314	75	254	5,284	930	950	2,784	634	1,061	13,238
1922	1,196	58	303	5,450	971	1,045	1,689	920	972	12,604
1923	1,471	74	331	6,247	1,454	1,208	2,968	863	1,139	15,755
1924	944	76	285	4,168	693	1,265	1,689	906	864	10,890
1925	1,098	68	270	4,662	1,050	1,027	2,935	785	1,409	13,304
1926	1,138	72	328	4,425	936	970	2,891	809	1,365	12,934
1927	1,359	108	223	4,949	1,362	926	3,387	795	1,473	14,982
Totals	8,520	531	1,994	35,185	7,396	7,391	18,343	5,712	8,283	93,355

2347 *Shipments from ten southwestern Idaho counties, by years*

[Adams County is included with Washington County. Shipping point, Weiser]

Commodity	Carloads, 1921	Carloads, 1922	Carloads, 1923	Carloads, 1924	Carloads, 1925	Carloads, 1926	Carloads, 1927	Totals
Barley	18	10	20	129	42	34	31	284
Corn	11	12	8	18	54	24	26	153
Oats	16	55	51	69	141	87	95	514
Wheat	1,055	1,207	529	525	921	1,546	1,105	6,888
Flour	358	487	425	412	350	459	581	3,072
Bran	89	82	55	75	67	135	92	595
Other mill products	31	35	42	27	76	18	31	260
Hay	865	504	610	409	350	207	476	3,421
Apples	3,749	2,242	4,497	2,054	4,479	3,431	4,909	25,361
Fruit, dried	29	32	38	41	18	34	50	242
Prunes	1,493	1,135	1,728	566	833	1,145	1,104	8,004
Canned goods	25	12	14	14	54	40	40	199
Potatoes	2,031	1,981	2,429	1,746	1,287	971	979	11,424
Other vegts	291	761	865	463	562	417	578	3,937
Other green fruit	31	128	249	30	21	67	----	526
Cattle	1,251	1,084	1,511	1,514	1,507	1,463	1,394	9,724
Hogs	150	271	422	596	347	405	482	2,673
Horses and mules	69	81	111	120	107	122	135	745
Sheep	1,724	2,485	2,151	2,082	1,600	1,767	1,803	13,612
Eggs	(1)	(1)	(1)	(1)	151	186	208	525
Poultry	(1)	(1)	(1)	(1)	75	87	113	275
Butter	(1)	(1)	(1)	(1)	275	281	348	904
Cheese	(1)	(1)	(1)	(1)	7	8	2	17
Totals	13,286	12,604	15,755	10,890	13,304	12,934	14,582	93,355

2348	Elmore	Ada	Canyon	Gem	Owyhee	Payette	Boise	Washington	Valley	Total
Barley	----	3	9	1	----	8	----	10	----	31
Corn	----	12	13	1	----	----	----	----	----	26
Oats	----	6	5	1	----	----	4	1	78	95
Wheat	15	247	509	55	10	90	2	50	37	1,105
Flour	----	9	334	----	----	1	----	235	2	581
Bran	----	----	65	----	----	----	----	27	----	92
Other mill products	----	3	15	----	----	3	----	4	6	31
Hay	1	34	162	8	----	245	1	10	15	476
Apples	1	273	855	787	79	2,423	----	491	----	4,909
Fruit, dried and evaporated	----	8	2	----	----	40	----	----	----	50
Prunes	----	305	182	223	39	236	----	119	----	1,104
Fruit and vegts., canned	----	----	18	----	----	20	----	1	1	40
Potatoes	----	6	787	42	4	23	----	115	2	979
Other vegts	----	87	473	12	----	6	----	----	----	578
Cattle	34	140	509	94	137	164	47	142	127	1,394
Hogs	10	45	277	42	5	56	4	40	3	482
Horses & mules	9	29	43	3	31	3	1	12	4	135
Sheep	150	54	236	88	621	39	49	46	520	1,803
Eggs	----	13	174	----	----	15	----	6	----	208
Poultry	3	47	35	5	----	13	----	10	----	113
Butter	----	38	156	----	----	1	----	153	----	348
Cheese	----	----	----	----	----	1	----	1	----	2
Total	223	1,359	4,949	1,362	926	3,387	108	1,473	795	14,582

[1] No record.

2349

Shipments from ten southwestern Idaho counties

[Adams County is included with Washington. Shipping point, Weiser]

[Number of carloadings]

1926

Commodity	Ada County	Boise County	Elmore County	Canyon County	Gem County	Owyhee County	Payette County	Valley County	Washington county	Total
Barley	1		2	7	1				23	34
Corn				21		2			1	24
Oats	4	1	1	14				67		87
Wheat	250	1	18	812	51	114	94	24	182	1,546
Flour	3			297					159	459
Bran	3			96					36	135
Other mill products	1			13		1			2	17
Hay	25			126		1	1	28	26	207
Apples	231			449	387	28	2,005		331	3,431
Fruit, dried				1			33			34
Prunes	271			180	185	46	303		160	1,145
Canned goods	2			14			24			40
Potatoes	13	1	4	707	16	72	66	1	91	971
Other vegts	50	3		272	49	4	35	4		417
Other green fruit				2	56	1	6		2	67
Cattle	137	37	111	489	76	184	168	100	161	1,463
Hogs	29	5	2	241	22	20	51	4	31	405
Horses & mules	32	1	20	36	4	5	9	2	13	122
Sheep	26	23	168	279	84	492	39	579	77	1,747
Eggs	23			139			18		6	186
Poultry	35		2	36	5		5		4	87
Butter	2			188			32		59	281
Cheese				6			1		1	8
Totals	1,138	72	328	4,425	936	970	2,891	809	1,365	12,934

2350

1925

Barley	1			23	1	4	3		10	42
Corn	4		2	44	1		3			54
Oats	7	3	1	11	8	61	3	47		141
Wheat	154	2	13	607	22	11	46	23	43	921
Flour	2			195				1	152	350
Bran				43					24	67
Other mill prod	1			72			2		1	76
Hay	20		16	184		67		34	29	330
Apples	207			845	607	49	2,098		673	4,479
Fruits, dried	5			1			12			18
Prunes	193			86	182	20	226		126	833
Canned goods				13			39	1	1	54
Potatoes	21	8		1,005	17	158	65		13	1,267
Other vegts	136		2	301	34	8	78		3	562
Other green fruit	3				15		3			21
Cattle	142	36	102	503	62	214	184	103	161	1,507
Hogs	26	5	1	194	29	19	50		23	347
Horses & mules	24	1	7	34	4	3	2	9	23	107
Sheep	47	13	126	268	63	413	24	567	79	1,600
Eggs	14			107			6		4	131
Poultry	27			21	5		5		17	75
Butter	61			101			86		27	275
Cheese	3			4						7
Totals	1,098	68	270	4,662	1,050	1,027	2,935	785	1,409	13,304

Shipments from ten southwestern Idaho counties—Continued

2351 1924

Commodity	Ada County	Boise County	Elmore County	Canyon County	Gem County	Owyhee County	Payette County	Valley County	Washington county	Total
Barley	8		1	68	3	15	5		29	129
Corn			1	15			2			18
Oats	15			24	1	1	5	21	2	69
Wheat	67	1		345	20	33	36	15	8	525
Flour			1	210	13				188	412
Bran				41	1				33	75
Other mill prod				20	4		1		2	27
Hay	100		24	213		59		13		409
Apples	154			323	281	26	1,115		155	2,054
Fruit, dried	16			2			23			41
Prunes	165			115	125	28	80		53	566
Canned goods							14			14
Potatoes	7		1	1,360	5	304	38		31	1,746
Other vegts	66	5		281	31	2	71	1	6	463
Green fruit	4				15	1	3		7	30
Cattle	179	43	69	479	61	261	155	151	116	1,514
Hogs	66	6	1	351	36	25	69	4	38	596
Horses & mules	23		3	43	1	7	1	12	30	120
Sheep	74	21	184	278	96	503	71	689	166	2,082
Totals	944	76	285	4,168	693	1,265	1,689	906	864	10,890

2352 1923

Barley				11					9	20
Corn	1		1	5			1			8
Oats	7		1	10	1	1	3	28		51
Wheat	1	1	1	322	24	30	25	13	42	529
Flour				219	9		7	1	189	425
Bran				28					27	55
Other mill prod				35	3				4	42
Hay	125		60	335	1	42	4	43		610
Apples	351		1	1,067	632	48	2,066		332	4,497
Fruit, dried	23			2			12		1	38
Prunes	437			308	333	49	420		181	1,728
Canned goods	4			2			8			14
Potatoes	64		10	1,967	10	273	86		19	2,429
Other vegts	119	9		607	30	2	66	5	27	865
Green fruit	7			19	190	13	15		5	249
Cattle	165	47	93	507	82	250	123	102	141	1,511
Hogs	26	2	2	294	27	7	37		27	422
Horses & mules	26	1	1	55	4	1	6	3	14	111
Sheep	45	14	161	454	108	492	89	667	121	2,151
Total	1,471	74	331	6,247	1,454	1,208	2,968	863	1,139	15,755

2353 1922

Barley				5	1		3		1	10
Corn	1			7				3	1	12
Oats	7			6			2	40		55
Wheat	221	1	7	738	35	47	82	29	47	1,207
Flour				245	8		25		209	487
Bran	2			44					36	82
Other mill prod				33	1		1			35
Hay	152		15	262		4		20	51	504
Apples	168			534	315	30	927		268	2,242
Fruit, dried	7			2			18		5	32
Prunes	385			163	213	29	247		88	1,135
Canned goods	6						5		1	12
Potatoes	12		7	1,552	4	296	73	1	36	1,981
Other vegts	71			518	52		83	22	25	761
Green fruit	3				104		16		5	128
Cattle	51	22	75	391	77	172	112	86	98	1,084
Hogs	10	3	2	183	22	5	30		16	271
Horses & mules	20		2	41			4	6	8	81
Sheep	80	32	195	726	139	462	61	713	77	2,485
Total	1,196	58	303	5,450	971	1,045	1,689	920	972	12,604

Shipments from ten southwestern Idaho counties—Continued

2354 1921

Commodity	Ada County	Boise County	Elmore County	Canyon County	Gem County	Owyhee County	Payette County	Valley County	Washington county	Total
Barley	1			2	3	1	1		10	18
Corn			1	8			1		1	11
Oats	1	1		4	1			8	1	16
Wheat	225	2	5	547	50	46	72	24	84	1,055
Flour	1			191	2		25		139	358
Bran				60			2		27	89
Other mill prod	1			16			7		7	31
Hay	112			529	36	129	14	20	25	885
Apples	248			846	328	33	1,877		417	3,749
Fruit, dried	19			3			15		2	39
Prunes	506			234	173	22	517		41	1,493
Canned goods	3			3			19			25
Potatoes	11			1,917	2	77	24			2,031
Other vegts	27			134	108	1	10		11	291
Green fruit	2			6	13	1	6		3	31
Cattle	44	43	54	417	108	243	125	74	143	1,251
Hogs	5	4		104	18		12		7	150
Horses & mules	23	2	2	21	1	1	1	5	13	69
Sheep	85	23	192	242	97	396	56	503	130	1,724
Total	1,314	75	254	5,284	930	950	2,784	634	1,061	13,286

2355 *State of Idaho, department of public works, bureau of highways—Expenditures on completed construction projects, southwestern counties*

County	Totals	Number of cars and trucks
Ada:		
1919		4,156
1920	$121,618.27	5,463
1921	27,343.21	6,105
1922	104,479.88	6,623
1923	77,443.86	7,644
1924		7,661
1925	100,873.59	8,914
1926	105,210.64	9,170
1927	235,433.85	9,723
Ada County subtotal	772,403.30	
Adams:		
1919		201
1920		252
1921	554,645.26	266
1922	88,706.75	289
1923		315
1924	302,453.87	337
1925	33,575.80	479
1926	67,712.25	587
1927	130,758.18	268
Adams Co. subtotal	1,177,852.11	
Boise:		
1919		176
1920	36,649.10	160
1921		158
1922		158
1923	8,000.00	170
1924	4,000.00	208
1925		257
1926		254
1927	22,731.17	271
Boise Co. subtotal	71,380.27	

County	Totals	Number of cars and trucks
Canyon:		
1919		2,999
1920	$642.40	4,173
1921	83,577.06	4,379
1922	11,138.25	4,538
1923	152,619.39	5,102
1924		5,417
1925	11,079.16	6,180
1926		7,020
1927	133,233.88	7,844
Canyon Co. subtotal	392,290.14	
Elmore:		
1919		402
1920	4,871.68	390
1921	91,463.69	649
1922	442,840.15	737
1923	1,288.76	897
1924	1,602.89	937
1925	11,193.41	985
1926		1,031
1927	108,525.84	1,044
Elmore Co. subtotal	661,786.42	
2356 Gem:		
1919		552
1920	2,109.15	773
1921	325.60	784
1922		832
1923		1,099
1924		1,302
1925		1,340
1926	25,364.90	1,493
1927	47,619.58	1,594
Gem Co. subtotal	75,419.23	

State of Idaho, department of public works, bureau of highways—Expenditures on completed construction projects, southwestern counties—Continued

County	Totals	Number of cars and trucks	County	Totals	Number of cars and trucks
Owyhee:			Valley:		
1919		354	1919		281
1920	$4,578.76	480	1920		225
1921	169,139.35	450	1921	$45,615.68	231
1922	3,102.12	461	1922		253
1923	3,294.76	532	1923	20,426.36	371
1924		591	1924	4,025.38	436
1925	25,787.20	693	1925		574
1926		719	1926		629
1927	10,500.00	712	1927	10,000.00	628
Owyhee Co. subtotal	216,402.19		Valley Co. subtotal	80,067.42	
Payette:			Washington:		
1919		717	1919		864
1920	2,115.73	1,246	1920	86.12	1,126
1921	227,895.01	1,346	1921	6,581.74	1,126
1922	69,228.97	1,493	1922	200,119.94	1,178
1923	16,711.68	1,563	1923	10,082.17	1,247
1924	75,502.43	1,601	1924		1,285
1925		1,713	1925	2,250.00	1,519
1926	47,689.11	2,021	1926		1,759
1927	136,532.31	2,303	1927	376,850.85	1,902
Payette Co. subtotal	575,675.24		Washington Co. subtotal	4,400,127.17	
			Grand total	4,400,127.17	

1919, with no expenditures 11,014
1927, having spent $4,400,127.17 26,439

2357 *State of Idaho, department of public works—Auto and truck registration*

[From records of secretary of state. Compiled July 10, 1928]

Year	Ada	Adams	Boise	Canyon	Elmore	Gem	Owyhee	Payette	Valley	Washington	Totals
1918—Autos											
Trucks											
Total [1]	3,067	167	120	2,178	364	454	309	668	147	720	8,194
1919—Autos											
Trucks											
Total [1]	4,156	201	176	2,999	483	583	354	917	281	864	11,014
1920—Autos											
Trucks											
Total [1]	5,463	252	160	4,175	589	779	480	1,246	225	1,126	14,495
1921—Autos	5,123	237	132	4,092	579	692	396	1,239	205	1,051	13,746
Trucks	982	29	26	287	70	92	54	107	26	75	1,748
Totals	6,105	266	158	4,379	649	784	450	1,346	231	1,126	15,494
1922—Autos	5,612	258	135	4,242	689	737	397	1,365	222	1,109	14,766
Trucks	1,011	31	23	294	68	96	64	128	31	69	1,815
Total	6,623	289	158	4,536	757	833	461	1,493	253	1,178	16,581
1923—Autos	6,673	274	141	4,855	842	975	467	1,423	336	1,178	17,164
Trucks	971	41	29	348	55	124	65	140	35	69	1,777
Total	7,644	315	170	5,103	897	1,099	532	1,563	371	1,247	18,941
1924—Autos	6,785	302	162	4,714	800	1,174	497	1,385	372	1,152	17,343
Trucks	876	35	46	703	137	128	94	216	64	133	2,432
Total	7,661	337	208	5,417	937	1,302	591	1,601	436	1,285	19,775
1925—Autos	7,976	435	222	5,503	874	1,217	617	1,533	517	1,422	20,316
Trucks	938	44	35	657	111	123	76	180	57	97	2,318
Totals	8,914	479	257	6,160	985	1,340	693	1,713	574	1,519	22,634
1926—Autos	8,535	533	225	6,427	901	1,373	646	1,815	586	1,648	22,689
Trucks	635	54	29	593	100	120	73	206	43	111	1,964
Total	9,170	587	254	7,020	1,001	1,493	719	2,021	629	1,759	24,653
1927—Autos	8,994	561	238	6,980	932	1,455	639	2,052	584	1,774	24,209
Trucks	729	67	33	664	112	129	73	251	44	128	2,230
Totals	9,723	628	271	7,644	1,044	1,584	712	2,303	628	1,902	26,439

[1] First 3 years show autos and trucks together.

2359 INCREASED REGISTRATION DOES NOT FULLY SHOW INCREASE OF AUTOMOBILES

If, as the United States Internal Revenue Office figures, 5 years is the life of a car, then replacement—

In 1923 of cars in use in 1918 would be	8,194
In 1924 " " " " " 1919 " "	11,014
In 1925 " " " " " 1920 " "	14,496
In 1926 " " " " " 1921 " "	15,494
In 1927 " " " " " 1922 " "	16,581
Replacement	65,778
Number of licenses in 1927 exceeds number in 1918 by difference between 26,439 and 8,194, or	18,245
Or a total of new cars purchased	84,023

Freight charges at an average of $150 per car would be $12,603,750.00.

2360 *Relationship of population, expenditures on roads, and autos*

County	1920			1927		
	Population, U. S. census	Expended on roads, total	Autos licensed	Estimated population, Rand-McNally	Expended on roads, total	Autos licensed
Ada	35,213	$121,618.27	5,463	37,423	$772,403.30	9,72
Adams	2,966		252	3,077	1,177,852.11	63
Boise	1,822	36,649.10	160	1,979	71,339.27	27
Canyon	26,932	642.40	4,175	29,256	392,290.14	7,64
Elmore	5,087	4,871.68	589	5,197	661,786.42	1,04
Gem	6,427	2,109.15	779	6,981	75,419.23	1,38
Owyhee	4,694	4,578.76	480	4,930	216,402.19	71
Payette	7,021	2,115.73	1,246	7,627	573,675.24	2,30
Valley	2,524		225	2,742	80,067.42	63
Washington	9,424	86.12	1,126	9,775	376,850.85	1,90
Total	102,110	172,670.21	14,495	108,987	4,400,127.17	26,49

County	1920 per capita		1927 per capita	
	Expended on road	Autos	Expended on road	Autos
Ada	$3.45379	6.44573	$20.63980	3.8432
Adams		11.76985	382.79237	4.8000
Boise	2.01148	11.38750	36.07341	7.3023
Canyon	.02385	6.45198	13.40888	3.8732
Elmore	.95767	8.63667	127.33906	4.9779
Gem	3.28170	8.26032	10.80350	4.4073
Owyhee	.97544	9.77917	43.89496	6.9264
Payette	.30134	5.63483	75.47860	3.3117
Valley		11.21778	29.20037	4.3662
Washington	.00091	8.36945	38.44251	5.1302
Average for ten counties	1.69102	7.04450	40.37295	4.1221

2361 *Motor-fuel sales as reported by the office of the secretary of state of Idaho*

County	1925	1926	1927	County	1925	1926	1927
	Gallons	*Gallons*	*Gallons*		*Gallons*	*Gallons*	*Gallons*
Ada	2,907,438	3,498,249	4,110,340	Valley	376,559	445,346	313,174
Adams	112,448	167,791	169,993	Washington	608,888	743,631	923,044
Boise	96,178	133,644	175,257				
Canyon	2,492,669	3,011,686	2,813,842	Total	8,358,310	10,129,502	10,313,953
Elmore	630,226	746,554	821,560	Weight	55,164,846	66,854,713	68,072,090
Gem	445,275	533,987	318,432	Freight, @ 33⅓			
Owyhee	48,793	83,179	18,661	per cwt	$183,882.92	$222,849.04	$226,906.97
Payette	639,836	765,435	649,650				

2362 *Exhibit No. 6*

By Samuel L. Newton, witness for P. U. C. I.

I. C. C. docket No. 19680

Before the Interstate Commerce Commission

I. C. C. docket No. 19680

PUBLIC SERVICE COMMISSION OF OREGON

vs.

CENTRAL PACIFIC RAILWAY COMPANY ET AL.

Exhibit of the Public Utilities Commission of Idaho

Carload shipments from stations on the Oregon Short Line Railroad for the years 1927–1921, inclusive, of commodities as shown

	2363 Ada County								Elmore County			Owyhee County			
	Orchard	Kuna	Boise	Perkins	Beatty	Meridian	Sonna	Total	Mt. Home	Sunnyside	Total	Murphy	McCoard	Homedale	Total
Barley	----	1	----	----	----	2	----	3	----	----	----	----	----	----	----
Corn	----	----	12	----	----	----	----	12	----	----	----	----	----	----	----
Oats	----	----	5	----	----	1	----	6	----	----	----	----	----	----	----
Wheat	3	99	58	7	----	80	----	247	14	1	15	4	2	4	10
Flour	----	----	9	----	----	----	----	9	----	----	----	----	----	----	----
Bran	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Other mill products	----	1	2	----	----	----	----	3	----	----	----	----	----	----	----
Hay	----	20	4	----	4	5	1	34	1	----	1	----	----	----	----
Apples	----	50	51	18	93	61	----	273	1	----	1	----	----	79	79
Fruit, dried & evaporated	----	----	----	----	----	8	----	8	----	----	----	----	----	----	----
Prunes	----	13	39	11	57	185	----	305	----	----	----	----	3	36	39
Fruit & veg., canned	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Potatoes	----	----	6	----	----	----	----	6	----	----	----	----	----	4	4
Other veg	----	----	37	----	----	50	----	87	----	----	----	----	----	----	----
Cattle	2	1	23	----	----	114	----	140	34	----	34	113	----	24	137
Hogs	----	----	8	----	----	37	----	45	10	----	10	1	----	4	5
Horses & mules	1	----	28	----	----	----	----	29	9	----	9	7	----	24	31
Sheep	----	3	30	----	----	21	----	54	150	----	150	559	----	62	621
Eggs	----	----	1	----	----	12	----	13	----	----	----	----	----	----	----
Poultry	----	----	6	----	----	41	----	47	3	----	3	----	----	----	----
Butter	----	----	38	----	----	----	----	38	----	----	----	----	----	----	----
Cheese	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Total	6	188	357	36	154	617	1	1,359	222	1	223	684	5	237	926

Carload shipments from stations on the Oregon Short Line Railroad for the years 1927–1921, inclusive, of commodities as shown—Continued

2364

	Canyon County																		
	Collopy	Nampa	Deal	Noble	Maddens	Caldwell	Bowmont	Middleton	Westma	Shelp	Melba	Notus	Greenleaf	Stoddard	Tucker	Warrens	Wilder	Parma	Apple Valley	Total
Barley		1				2					2	1		1				2		
Corn		5				7												1		
Oats		1				1	1	1			1									
Wheat	3	174				108	38	16	19		23	36	15	10			56	101		
Flour		179				155														
Bran		60				5														
Other mill products		11				3														
Hay	17	11	2		10	13	9		18		31	9		19		4	19			
Apples	6	137	6	74	2	129				64			22		2		33	171	200	
Fruit, dried & evaporated																		2		
Prunes		29			6	32		1		5							35	74		
Fruits & veg., canned		7															11			
Potatoes		105	2		2	229	32	1	9	3	28	32	3	82	59		125	54	21	
Other veg		136	73	1	1	66	24	16			3	1		10	2		13	127		
Cattle		194				205		2		1	16						57	34		
Hogs		78				95					23						48	33		
Horses & mules		15				22		1				4						1		
Sheep		40				67		1			13	9		2			45	59		
Eggs		10				164														
Poultry		9				26														
Butter		74				82														
Cheese																				
Total	26	1,276	83	75	21	1,411	104	39	46	73	140	92	40	124	63	4	443	659	2304	

2365

	Gem County								Payette County									
	Jenness	Allendale	Bramwell	Emmett	Plaza	Black Canyon	Letha	Montour	Total	Falks	Larkin	Washoe	New Plymouth	Payette	Ingard	Eiffle	Buckingham	Wood	Fruitland	Total
Barley							1		1				2	5		1				
Corn					1				1											
Oats				1					1											
Wheat		11		21			17	6	55	7			36	28				1	18	
Flour																	1			
Bran																				
Other mill products														3						
Hay				6			2		8				11	99	135					
Apples	10	1	42	680	7	19	27	1	787			90	530	573		170	130	173	757	
Fruit, dried & evaporated													5	20	15					
Prunes		6		198	8		11		223			3	45	81			7	27	73	
Fruit & veg., canned														20						
Potatoes		39		1			1	1	42		2	1		16				1	3	
Other vege				3			9		12					1		2			3	
Cattle				43			19	32	94				10	154						
Hogs				20			2	20	42				10	46						
Horses & mules				2				1	3					3						
Sheep				36			26	26	88				3	36						
Eggs														15						
Poultry				3			2		5					13						
Butter														1						
Cheese														1						
Total	10	57	42	1,014	16	19	115	89	1,362	7	2	94	652	1,115	150	173	138	202	854	

Carload shipments from stations on the Oregon Short Line Railroad for the years 1927–1921, inclusive, of commodities as shown—Continued

2366	Washington County					Valley County									Boise County			
	Feltham	Weiser	Jonathan	Crystal	Total	Smiths Ferry	Cabarton	Christman	Cascade	Timothy	Arling	Donnelly	Norwood	McCall	Total	Horseshoe Bend	Gardena	Banks	Total
Barley		10			10														
Corn																			
Oats		1			1	1	2		18	5	37	13	2		78			4	4
Wheat		50			50		2		3	1	3	5	23		37		2		2
Flour		235			235				2						2				
Bran		27			27														
Other mill products		4			4						6				6				
Hay		10			10		5	3				4	2	1	15	1			1
Apples	273	126	88	4	491														
Fruit, dried & evaporated																			
Prunes	3	30	13	73	119														
Fruit and vege., canned		1			1		1												
Potatoes		68	47		115				1		1				2				
Other vege																			
Cattle		142			142	12	1		40			23	2	49	127	31	1	15	47
Hogs		40			40				1			1	1		3	1		3	4
Horses & mules		12			12		3							1	4	1			1
Sheep		46			46	89			113			112	12	194	520	41		8	49
Eggs		6			6														
Poultry		10			10														
Butter		153			153														
Cheese																			
Total	276	972	148	77	1,473	102	14	3	178	6	47	158	42	245	795	75	3	30	108

2367 *Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho*

1926

[Compiled from O. S. L. R. R. Form 796]

2367 Commodity	Ada County								Boise County				
	Orchard	Kuna	Boise	Perkins	Beatty	Meridian	Sonna	Total	Horseshoe Bend	Gardena	Larkin	Banks	Total
Barley		1						1					
Corn													
Oats		2	2					4				1	1
Wheat	1	51	52	15		131		250		1			1
Flour			3					3					
Bran			3					3					
Other mill			1					1					
Hay		18	5			2		25					
Apples		73	61	5	54	18	20	231					
Fruit, dried													
Prunes		7	29	14	43	177	1	271					
Canned goods			2					2					
Potatoes			8			5		13			1		1
Other vegetables			20	1		29		50			3		3
Other green fruit													
Cattle	1		16			121		137	24	2		11	37
Hogs			7			22		29	1			4	5
Horses and mules			31			1		32	1				1
Sheep	3	1	9			13		26	21			2	23
Eggs			8			15		23					
Poultry			4			31		35					
Butter			2					2					
Cheese													
Total	5	153	262	35	97	565	21	1,138	47	3	4	18	72

Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho—Continued

1925—Continued

2368

1926 Commodity	Canyon County															
	Callopy	Nampa	Noble	Maddens	Caldwell	Bowmont	Middleton	Westmo	Shelp	Melba	Notus	Greenleaf	Stoddard	Tuckers	Warrens	Allendale
Barley		3			1											
Corn		4			11					2						
Oats		2			2		1			6						
Wheat	3	204			250	28	13	13		14	31	15	15	2		11
Flour		176			121											
Bran		59			37											
Other mill		4			8											
Hay	2	7		15	4	4		4		46	1	1	32		2	
Apples	6	123	16	1	44	1			36		14	14				7
Fruit, dried																
Prunes	2	31		7	42				5							1
Canned goods					1											
Potatoes	3	111			182	39		27	4	29	22	5	78	36		19
Other vegts		99			55	3	11	1		3			1	2		
Other green frt		2														
Cattle		225			152		6			30	1					
Hogs		63			83					19						
Horses and mules		11			23		1									
Sheep		99			89	2	8			31	7			1		
Eggs		36			103											
Poultry		14			22											
Butter		99			89											
Cheese		6														
Totals	16	1,678	16	23	1,319	77	40	45	45	180	62	35	126	41	2	40

2360

1926 Commodity	Canyon County—Continued				Owyhee County					
	Wilder	Parma	Apple Valley	Total	Murphy	Homedale	Claytonia	Erbs	Stacy	Total
Barley	1	2		7	2					
Corn	2	2		21	2					114
Oats	1	2		14						
Wheat	56	150	2	812	2	34	2	75		114
Flour				297						
Bran				96						
Other mill products	1			13					1	1
Hay	6			126						
Apples	11	108	82	449		13		15		28
Fruit, dried		1		1						
Prunes	37	50	2	180		26		20		46
Canned goods	13			14						
Potatoes	96	45	11	707		16		56		72
Other vegts	8	89		272				4		4
Other green fruit				2				1		1
Cattle	50	25		489	151	13		20		184
Hogs	43	33		241				20		20
Horses & mules		1		36	5					5
Sheep	11	31		279	420	43		29		492
Eggs				139						
Poultry				36						
Butter				188						
Cheese				6						
Totals	336	539	97	4,425	580	146	2	240	1	970

Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho—Continued

1926—Continued

2370

1926 Commodity	Elmore County			Gem County				
	Mountain Home	Sunnyside	Total	Bramwell	Emmett	Letha	Montour	Total
Barley	2		2		1			1
Corn								
Oats	1		1					
Wheat	16	2	18		21	17	13	51
Flour								
Bran								
Other mill products								
Hay								
Apples				22	357	7	1	387
Fruit, dried								
Prunes				6	172	7		185
Canned goods								
Potatoes	4		4		12	1	3	16
Other vegetables					10	37	2	49
Other green fruit				1	54	1		56
Cattle	111		111		38	10	28	76
Hogs	2		2		9	1	12	22
Horses & mules	20		20		4			4
Sheep	168		168		38	27	19	84
Eggs								
Poultry	2		2		4		1	5
Butter								
Cheese								
Total	326	2	328	29	720	108	79	936

2371

1926 Continued	Valley County								
	Smiths Ferry	Cabarton	Cascade	Timothy	Arling	Donnelly	Norwood	McCall	Total
Barley									
Corn									
Oats		1	25	14	19	6	2		67
Wheat	1		6	1		1	15		24
Flour									
Bran									
Other mill products									
Hay		3			9	9	7		28
Apples									
Fruit, dried									
Prunes									
Canned goods									
Potatoes			1						1
Other vegetables			1					3	4
Other green fruit									
Cattle	7		43		1	23		21	100
Hogs			4						4
Horses & mules								2	2
Sheep	101		100			135		243	579
Eggs									
Poultry									
Butter									
Cheese									
Total	109	4	185	15	29	174	24	269	809

Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho—Continued

1926—Continued

2372

1926 Commodity	Payette County										Washington County						
	Falk	Washoe	Ingard	New Plymouth	Payette	Elfin	Buckingham	Word	Fruitland	Total	Feltham	Weiser	Jonathan	Crystal	Eaton	Cobb	Total
Barley												23					23
Corn												1					1
Oats																	
Wheat	4			37	37				16	94		181	1				182
Flour												159					159
Bran												36					36
Other mill												2					2
Hay				1	1					1		19	7				26
Apples	1	85	82	417	465	71	106	110	668	2,005	158	103	60	10			331
Fruit, dried				6	27					33							
Prunes	33	9	7	48	94	4	7	42	59	303	5	44	1	112			162
Canned goods					24					24							
Potatoes	1		3	5	31			6	20	66	2	46	42	1			91
Other vegts	1				3	14			17	35							
Other green fruit				1						6		2					2
Cattle				12	152	3			1	168		160			1		161
Hogs				5	46					51		31					31
Horses & mules					9					9		13					13
Sheep				2	37					39		77					77
Eggs					18					18		6					6
Poultry					5					5		4					4
Butter					32					32		59					59
Cheese					1					1		1					1
Total	40	94	92	534	987	92	113	158	781	2,891	163	967	111	123	1		1,365

2373

1925

Commodity	Ada County								Boise County				
	Orchard	Kuna	Boise	Perkins	Beatty	Meridian	Sonna	Total	Larkin	Horseshoe Bend	Gardena	Banks	Total
Barley		1						1					
Corn			1			3		4					
Oats			5	1		1		7				3	3
Wheat		66	17	3	1	67		154	1	1			2
Flour			2					2					
Bran													
Other mill products						1		1					
Hay		19	1					20					
Apples		22	54	15	71	29	16	207					
Fruit, dried			1			4		5					
Prunes		2	25	14	27	122	3	193					
Potatoes			19		1	1		21	8				8
Other vegetables		1	41	1		93		136					
Other green fruits			3					3					
Cattle	9	1	31			101		142		12	4	20	36
Hogs			8			18		26		2	1	2	5
Horses and mules			24					24			1		1
Sheep		5	35			7		47		10		3	13
Eggs			7			7		14					
Poultry			6			21		27					
Butter			61					61					
Cheese			3					3					
Total	9	117	334	34	100	475	19	1,098	9	25	6	28	68

Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho—Continued

1925—Continued

2374	Elmore County			Gem County						
1925 Commodity	Mountain Home	Sunnyside	Total	Jenness	Bramwell	Emmett	Plaza	Letha	Montour	Total
Barley									1	1
Corn	2		2					1		1
Oats	1		1					8		8
Wheat	11	2	13			5		7	10	22
Flour										
Bran										
Other mill products										
Hay	16		16							
Apples					17	545		40	5	607
Fruit, dried										
Prunes					1	165		15	1	182
Canned goods										
Potatoes					1	10			6	17
Other vegetables	2		2		2	3		29		34
Other green fruit						15				15
Cattle	102		102			27		11	24	62
Hogs	1		1			16		4	9	29
Horses and mules	7		7			4				4
Sheep	126		126			21	7	19	16	63
Eggs										
Poultry						3			2	5
Butter										
Cheese										
Total	268	2	270		21	814	7	134	74	1,050

2375	Canyon County															
1925 Commodity	Callopy	Nampa	Deal	Noble	Maddens	Caldwell	Bowmont	Middleton	Westma	Schelp	Melba	Notus	Greenleaf	Stoddard	Tucker	Warruns
Barley		7				10					1	2				
Corn		8				5							2			
Oats		4				5								1		
Wheat	8	133				158	31	11	11	8	13	43	18	9	8	
Flour		102				93										
Bran		31				12										
Other mill prod		5				11							9			
Hay	2	13			6	8	1		6	2	45	16		6		7
Apples		109		36		63	2			47			26			
Fruit, dried																
Prunes		28				17		1		4						
Canned goods																
Potatoes	10	201	1			142	61		39	6	30	21	3	70	27	28
Other vegts		117	2			29	48	20		2	12			7	5	
Other green fruit																
Cattle		232			1	142		4			16	1				
Hogs		38				66					12					
Horses & mules		19				13		1								
Sheep		123				88		1			2	6				
Eggs		28				79										
Poultry		12				9										
Butter		44				56										
Cheese		3				1										
Total	20	1,257	3	36	7	1,007	143	38	56	69	131	89	58	93	40	35

Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho—Continued

1925—Continued

2376

1925 Commodity	Canyon County—Continued					Owyhee County						
	Allendale	Wilder	Parma	Apple Valley	Totals	Murphy	McCoard	Homedale	Claytonia	Stacey	Erbs	Totals
Barley			3		23			4				4
Corn	10	16	3		44							
Oats			1		11				2		59	61
Wheat	15	49	92		607	1		10				11
Flour					195							
Bran					43							
Other mill prod	32	15			72							
Hay	3	69			184			6	2		59	67
Apples	7	16	135	404	845			30			19	49
Fruit, dried			1		1							
Prunes	1	21	14		86			11			9	20
Canned goods		13			13							
Potatoes	14	257	77	18	1,005			11	10		137	158
Other vegts	3	22	34		301			1			7	8
Other green fruit												
Cattle		50	57		503	181		27			6	214
Hogs		49	29		194			4			15	19
Horses & mules			1		34	1		2				3
Sheep		11	37		268	352		61				413
Eggs					107							
Poultry					21							
Butter			1		101							
Cheese					4							
	85	588	485	422	4,662	535		167	14		311	1,027

2377

1925 Commodity	Valley County									
	Smiths Ferry	Cabarton	Cascade	Timothy	Arling	Donnelly	Norwood	Chrisman	McCall	Totals
Barley										
Corn										
Oats		1	8	3	31	4				47
Wheat			2		2	1	16		2	23
Flour		1								1
Bran										
Other mill products										
Hay	2	1				18	12		1	34
Apples										
Fruit, dried										
Prunes										
Canned goods			1							1
Potatoes										
Other vegts										
Other green fruit										
Cattle	6		33			16			48	103
Hogs										
Horses & mules			3			2			4	9
Sheep	98		94			100			275	567
Eggs										
Poultry										
Butter										
Cheese										
Totals	106	3	141	3	33	141	28		330	785

Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho—Continued

1925—Continued

2378

1925 Commodity	Payette County										Washington County				
	Falk	Washoe	Ingard	New Plymouth	Payette	Effie	Buckingham	Wood	Fruitland	Totals	Feltham	Weiser	Jonathan	Crystal	Totals
Barley				2	1					3		10			10
Corn				3						3					
Oats				3						3					
Wheat	1			25	15				5	46	1	42			43
Flour												152			152
Bran												24			24
Other mill prod					2					2		1			1
Hay												29			29
Apples	8	125	119	404	508	96	143	177	518	2,098	349	139	136	49	673
Fruit, dried				4	8					12					
Prunes	8	3	4	93	81	2	2	10	23	226	2	35	2	87	126
Canned goods					39					39		1			1
Potatoes				3	39		1	1	21	65		12	1		13
Other vegts				4	28			2	44	78		2	1		3
Other green fruit					3					3					
Cattle				23	161					184		156			161
Hogs				11	39					50		23			23
Horses & mules					2					2		23			23
Sheep				6	18					24		79			79
Eggs					6					6		4			4
Poultry					5					5		17			17
Butter					86					86		27			27
Cheese															
Totals	17	128	123	581	1,041	98	146	190	611	2,935		776	140	136	1,469

2379

1924

Commodity	Ada County								Boise County				
	Orchard	Kuna	Boise	Perkins	Beatty	Meridian	Sonna	Total	Horseshoe Bend	Gardena	Larkin	Banks	Totals
Barley		1	2			4	1	8					
Corn													
Oats		1	9	1		4		15					
Wheat		15	7	2		43		67			1		1
Flour													
Bran													
Other mill prod													
Hay		91	1					100					
Apples		62	21	2	17	52		154					
Fruit, dried			8			8		16					
Prunes		4	27	10	28	96		165					
Canned goods													
Potatoes		2	4				1	7					
Other vegts			58			8		66			5		5
Other green fruit			3		1			4					
Cattle	2	3	32			142		179	17	2		24	43
Hogs		8	13			45		66	1	1		4	6
Horses & mules			21	1	1	1		23					
Sheep	2	23	33			16		74	18			3	21
Eggs													
Poultry													
Butter													
Cheese													
Total	4	210	239	16	46	427	2	944	36	3	6	31	76

Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho—Continued

1924—Continued

2380 1924 Commodity	Elmore County		Gem County					
	Mountain Home	Total	Bramwell	Emmett	Plaza	Letha	Montour	Total
Barley	1	1		1		1	1	3
Corn	1	1						
Oats				1				1
Wheat				12	1	6	1	20
Flour	1	1					13	13
Bran							1	1
Other mill products							4	4
Hay	24	24						
Apples			12	261		8		281
Fruit, dried								
Prunes				114		10	1	125
Canned goods								
Potatoes	1	1		1		4		5
Other vegetables			11	18			2	31
Other green fruit				13		2		15
Cattle	69	69		34		6	21	61
Hogs	1	1		13		5	18	36
Horses and mules	3	3				1		1
Sheep	184	184		35		40	21	96
Eggs								
Poultry								
Butter								
Cheese								
Total	285	285	23	503	1	83	83	693

2381 1924 Commodity	Canyon County														
	Callopy	Nampa	Deal	Noble	Maddens	Caldwell	Bowmont	Middleton	Westma	Shelp	Melba	Notus	Greenleaf	Stoddard	Tucker
Barley		18				14					1	1	1	2	
Corn		1				5					1	1			
Oats		4				4		3			2		1		
Wheat		71		2	1	23	21	15	6		8	19	13	7	6
Flour		105				100					5				
Bran		25				15									1
Other mill products		4				10			1				1		
Hay		31				11	13		2	5	69	10	2	5	
Apples	1	58	4	11		36				12			7		
Fruit, dried															
Prunes		21			1	29		1							
Canned goods															
Potatoes	4	203	6			179	66		40	9	62	43	7	119	45
Other vegetables	1	105	3			51	12	8			2	1		1	2
Other green fruit															
Cattle		209				159		6			13				
Hogs		105				94					23				1
Horses and mules		26				11		1		1	1				
Sheep		102				87		3			8	2			
Eggs															
Poultry															
Butter															
Cheese															
Total	6	1,088	13	13	2	828	112	37	49	27	195	77	32	134	55

Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho—Continued

1924—Continued

2382

1924 Commodity	Canyon County—Continued						Owyhee County					
	Warrens	Allendale	Wilder	Parma	Apple Valley	Total	Murphy	McCoard	Homedale	Claytonia	Erbs	Total
Barley	----	3	11	17	----	68	----	----	4	3	8	15
Corn	----	3	3	1	----	15	----	----	----	----	----	----
Oats	----	----	7	3	----	24	----	----	----	----	1	1
Wheat	----	10	35	107	1	345	----	----	7	2	24	33
Flour	----	----	----	----	----	210	----	----	----	----	----	----
Bran	----	----	----	----	----	41	----	----	----	----	----	----
Other mill products	----	----	4	----	----	20	----	----	----	----	----	----
Hay	14	15	36	----	----	213	----	7	49	----	3	59
Apples	----	4	4	82	104	323	----	----	15	----	11	26
Fruit, dried	----	----	----	2	----	2	----	----	----	----	----	----
Prunes	----	1	19	42	1	115	----	----	19	----	9	28
Canned goods	----	----	----	----	----	----	----	----	----	----	----	----
Potatoes	22	70	328	135	22	1,360	----	----	37	31	236	304
Other vegetables	----	----	27	68	----	281	----	----	----	----	2	2
Other green fruit	----	----	----	----	----	----	----	----	1	----	----	1
Cattle	----	----	45	47	----	479	212	----	45	----	4	261
Hogs	----	----	66	62	----	351	----	----	7	----	18	25
Horses and mules	----	----	----	3	----	43	7	----	----	----	----	7
Sheep	----	----	42	34	----	278	381	----	74	----	48	503
Eggs	----	----	----	----	----	----	----	----	----	----	----	----
Poultry	----	----	----	----	----	----	----	----	----	----	----	----
Butter	----	----	----	----	----	----	----	----	----	----	----	----
Cheese	----	----	----	----	----	----	----	----	----	----	----	----
Total	26	106	627	603	128	4,168	600	7	258	36	364	1,265

2383

1924 Commodity	Valley County							
	Smiths Ferry	Cabarton	Cascade	Arling	Donnelly	Norwood	McCall	Totals
Barley	----	----	----	----	----	----	----	----
Corn	----	----	----	----	----	----	----	----
Oats	----	----	9	9	3	----	----	21
Wheat	----	----	----	----	5	9	1	15
Flour	----	----	----	----	----	----	----	----
Bran	----	----	----	----	----	----	----	----
Other mill products	----	----	----	----	----	----	----	----
Hay	----	1	----	----	11	1	----	13
Apples	----	----	----	----	----	----	----	----
Fruit, dried	----	----	----	----	----	----	----	----
Prunes	----	----	----	----	----	----	----	----
Canned goods	----	----	----	----	----	----	----	----
Potatoes	----	----	----	----	----	----	----	----
Other vegts.	----	----	----	----	----	----	----	----
Other green fruit	----	----	1	----	----	----	----	----
Cattle	23	----	54	----	24	----	50	151
Hogs	----	----	2	----	----	----	2	4
Horses & mules	----	2	1	----	----	----	9	12
Sheep	151	----	106	----	120	----	312	689
Eggs	----	----	----	----	----	----	----	----
Poultry	----	----	----	----	----	----	----	----
Butter	----	----	----	----	----	----	----	----
Cheese	----	----	----	----	----	----	----	----
Totals	174	3	173	9	163	10	374	906

Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho—Continued

1924—Continued

2384

1924 Commodity	Payette County										Washington County					
	Falk	Washoe	Ingard	New Plymouth	Payette	Elfie	Buckingham	Ward	Fruitland	Totals	Feltham	Weiser	Jonathan	Crystal	Eaton	Totals
Barley				2	2					5		29				29
Corn					2					2						
Oats	1			2	2					5		2				2
Wheat		1		22	11				2	36		8				8
Flour												188				188
Bran												33				33
Other mill					1							2				2
Hay																
Apples	3	20	35	246	179	76	24	101	431	1,11	85	36	34			155
Fruit, dried				4	19					23						
Prunes	3		1	22	27			12	15	80	1	16	1	35		53
Canned goods					14					14						
Potatoes					30				8	38	1	29		1		31
Other vegts					6			2	63	71		6				6
Other green fruit					3					3		7				7
Cattle		4		24	124				3	155		110			6	116
Hogs				24	45					69		38				38
Horses & mules					1					1		30				30
Sheep				50	21					71		166				166
Eggs																
Poultry																
Butter																
Cheese																
Totals	7	25	36	396	488	76	24	115	522	1,689	87	700	35	36	6	864

2385

1923 Commodity	Ada County								Boise County			
	Orchard	Kuna	Boise	Perkins	Beatty	Meridian	Sonna	Total	Horseshoe Bend	Gardena	Banks	Total
Corn			1			1		1				
Oats			6			1		7				
Wheat		27	1	5		37	1	71		1		1
Flour												
Hay		121	2				2	125				
Apples		82	66	19	133	25	26	351				
Fruit, dried			8			15		23				
Prunes		28	57	47	73	229	3	437				
Canned goods			4					4				
Potatoes		14	32			18		64				
Other vegts		19	70			29	1	119	9			9
Green fruit			4		1	1	1	7				
Cattle	1	2	24			138		165	15		32	47
Hogs		1	4			21		26			2	2
Horses & mules			25			1		26			1	1
Sheep	1	7	30			7		45	9		5	14
Total	2	301	334	71	207	522	34	1,471	33	1	40	74

Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho—Continued

1923—Continued

2386

1923 Commodity	Canyon county													
	Callopy	Nampa	Deal	Noble	Maddens	Caldwell	Bowmont	Middleton	Westma	Shelp	Melba	Notus	Greenleaf	Stoddard
Barley	----	3	----	----	----	5	----	----	----	----	----	----	----	----
Corn	----	----	----	----	----	4	----	----	----	----	----	----	----	----
Oats	----	3	----	----	----	1	----	----	----	----	2	3	----	----
Wheat	2	81	----	----	1	50	35	13	10	----	17	15	18	4
Flour	----	112	----	----	----	106	----	----	----	1	----	----	----	----
Bran	----	21	----	----	----	7	----	----	----	----	----	----	----	----
Other mill prod	----	12	----	----	----	6	----	----	----	----	----	----	----	----
Hay	4	30	4	----	----	9	58	----	4	----	141	----	1	55
Apples	4	201	4	14	2	103	4	7	----	88	1	----	36	----
Prunes	----	38	1	7	10	55	----	21	----	2	----	----	----	----
Potatoes	12	437	20	1	1	182	75	2	53	23	147	31	27	124
Other vegts	1	201	2	1	----	71	30	3	----	1	46	----	----	27
Green fruit	----	5	----	----	----	2	----	----	----	----	----	----	2	----
Cattle	49	192	----	----	----	200	----	7	----	----	13	2	----	----
Hogs	1	67	----	----	----	105	----	----	----	----	5	8	----	----
Horses & mules	1	29	----	----	----	19	----	----	----	----	1	----	----	----
Sheep	----	201	----	----	----	106	----	3	----	----	12	----	----	----
Totals	74	1,635	31	23	14	1,031	202	58	67	115	385	59	84	210

2387

1923 Commodity	Canyon County—continued							Owyhee County					
	Tucker	Warrens	Allendale	Wilder	Parma	Apple Valley	Totals	Murphy	McCoard	Homedale	Claytonia	Erbs	Total
Barley	----	----	1	1	----	1	11	----	----	----	----	----	----
Corn	----	----	----	1	----	----	5	----	----	----	----	----	----
Oats	----	----	----	----	1	----	10	----	----	----	----	1	1
Wheat	----	4	8	29	33	2	322	----	2	9	2	17	30
Flour	----	----	----	----	----	----	219	----	----	----	----	----	----
Bran	----	----	----	----	----	----	28	----	----	----	----	----	----
Other mill	----	----	----	17	----	----	35	----	----	----	----	----	----
Hay	----	29	----	----	----	----	335	35	----	7	----	----	42
Apples	2	----	9	6	187	399	1,067	----	----	46	----	2	48
Fruit, dried	----	----	----	----	2	----	2	----	----	----	----	----	----
Prunes	3	----	7	37	125	2	308	----	----	49	----	----	49
Canned goods	----	----	----	----	----	----	2	----	----	----	----	----	----
Potatoes	49	153	65	389	160	16	1,967	1	5	51	25	191	273
Other vegts	----	3	----	44	175	2	607	----	2	----	----	----	2
Green fruit	1	----	1	----	5	3	19	----	----	13	----	----	13
Cattle	----	----	----	2	42	----	507	212	----	35	----	3	250
Hogs	1	----	----	47	60	----	294	1	----	4	----	2	7
Horses, mules	----	----	----	1	2	----	55	----	----	1	----	----	1
Sheep	----	----	----	55	77	----	454	349	----	143	----	----	492
Totals	56	189	91	629	869	425	6,247	598	9	358	27	216	1,208

Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho—Continued

1923—Continued

2388

1923 Commodity	Elmore County			Gem County				
	Mountain Home	Sunnyside	Totals	Bramwell	Emmett	Letha	Montour	Totals
Corn	1		1					
Oats	1		1		1			1
Wheat		1	1		13	6	5	24
Flour							9	9
Other mill prod							3	3
Hay	60		60		1			1
Apples	1		1	34	574	16	8	632
Fruit, dried								
Prunes				6	287	36	4	333
Potatoes	10		10	2	3	1	4	10
Other vegts				6	23		1	30
Green fruit				14	164	12		190
Cattle	93		93		27	19	35	81
Hogs	2		2		11	6	10	27
Horses & mules	1		1		3		1	4
Sheep	161		161		38	68	2	108
Total	330	1	331	62	1,145	164	83	1,454

2389

1923 Commodity	Valley County								
	Smith Ferry	Cabarton	Cascade	Timothy	Arling	Donnelly	Norwood	McCall	Totals
Oats		1	3	1	11	7	5		28
Wheat			3				9	1	13
Flour			1						1
Hay		6			3	30	4		43
Other vegts			3			2			5
Cattle	6		50			17		30	103
Horses & mules		1			1			1	3
Sheep	162		118			49	14	324	667
Totals	168	8	178	1	15	105	32	356	863

2390

1923 Commodity	Payette County										Washington County					Total
	Falk	Washoe	Ingard	New Plymouth	Payette	Elfelle	Buckingham	Wood	Fruitland	Total	Feltham	Weiser	Jonathan	Crystal	Eaton	
Barley												9				9
Corn					1					1						
Oats				1	2					3						
Wheat				12	10				3	25	1	40			1	42
Flour								7		7		189				189
Bran												27				27
Other mill prod												4				4
Hay					4					4						
Apples	9	45	122	434	311	119	171	133	722	2,066	145	69	70	48		332
Fruit, dried				2	10					12		1				1
Prunes	7	11	19	85	152	3	9	61	73	420	4	57	5	115		181
Canned goods					7				1	8						
Potatoes	3			8	54			1	20	86		17	1		1	19
Other vegts				2	1	13	7	2	41	66		20		7		27
Green fruit	2			1	7			3	2	15				5		5
Cattle				23	100					123		141				141
Hogs				15	22					37		27				27
Horses & mules				2	4					6		14				14
Sheep				48	41					69		121				121
Totals	21	56	141	633	726	135	187	207	862	2,968	150	736	76	175	2	1,139

Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho—Continued

2391 1922

Commodity	Ada County								Boise County			
	Orchard	Kuna	Boise	Perkins	Beatty	Meridian	Sonna	Total	Horseshoe Bend	Gardena	Banks	Total
Barley			1					1				
Corn			6			1		7				
Oats		65	15	17	10	108	6	221		1		1
Wheat												
Flour			2					2				
Bran												
Other mill prod												
Hay		148	3			1		152				
Apples		52	9	4	78	18	7	168				
Fruit dried			1			6		7				
Prunes		19	52	39	76	198	1	385				
Canned goods			6					6				
Potatoes		3	4	3		2		12				
Other vegts		18	39			24		71				
Green fruit						2	1	3				
Cattle		1	18			32		51	5		17	22
Hogs			2			8		10			3	3
Horses & mules			19			1		20				
Sheep	1	2	37			40		80	11		21	32
Totals	1	308	214	63	164	441	15	1,196	16	1	41	58

2392 1922

Commodity	Canyon County												
	Callopy	Nampa	Deal	Noble	Maddens	Caldwell	Bowmont	Middleton	Westma	Shelp	Melba	Notus	Greenleaf	Stoddard
Barley						1	1				2			
Corn		1				3								
Oats		1				1								
Wheat	6	152		7	5	262	42	20			15	16	26	8
Flour		161				84								
Bran	1	29				14								
Other mill prod		17				1	1							
Hay	18	17	7	11		38	6			3	49			
Apples	1	185	3	4		73	13	6		34			19	
Fruit, dried														
Prunes		50			6	26	3	1		4				
Canned goods														
Potatoes	6	269			1	170	119	9	12	2	182	15	24	123
Other vegts		210	1			67	26	2			22			28
Other green fruit														
Cattle		153				184		7			3	5		
Hogs		28				60								
Horses & mules	2	5				32	1							
Sheep		221				250	1				23	24		
Totals	34	1,499	11	22	12	1,266	211	47	12	43	298	60	69	159

Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho—Continued

2393 1922

Commodity	Canyon County—Continued							Owyhee County					
	Tucker	Warrens	Allendale	Wilder	Parma	Apple Valley	Total	Murphy	McCoard	Homedale	Claytonia	Erb	Total
Barley					1		5						
Corn				3			7						
Oats					1	3	6						
Wheat	2	1	13	55	108		738	1	1	31	2	12	47
Flour							245						
Bran							44						
Other mill prod				14			33						
Hay			7	2		104	262	1		3			4
Apples			7		105	83	534			30			30
Fruit, dried					2		2						
Prunes			3	24	46		163			20			20
Canned goods													
Potatoes	45	163	80	216	112	2	1,552	2	9	156	24	105	296
Other vegts	1	9	1	40	110	1	518						
Cattle				2	37		391	134		38			172
Hogs				42	53		183			5			5
Horses & mules					1		41						
Sheep				63	144		726	359		103			462
Total	48	173	111	461	721	193	5,450	497	10	395	26	117	1,045

2394 1922

Commodity	Elmore County		Gem County				
	Mountain Home	Total	Bramwell	Emmett	Letha	Montour	Total
Barley					1		1
Corn							
Oats							
Wheat	7	7		21	8	6	35
Flour						8	8
Bran							
Other mill prod						1	1
Hay	15	15					
Apples			7	294	13	1	315
Fruit, dried							
Prunes				201	12		213
Canned goods							
Potatoes	7	7		4			4
Other vegts			7	42	2	1	52
Other green fruit			3	97	4		104
Cattle	75	75		25	43	9	77
Hogs	2	2		12	1	9	22
Horses & mules	2	2					
Sheep	195	195		64	59	16	139
Totals	303	303	17	760	143	51	971

Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho—Continued

2395

1922—Continued

1922 Commodity	Valley County								
	Smiths Ferry	Cabarton	Cascade	Timothy	Arling	Donnelly	Norwood	McCall	Total
Corn			3						3
Oats			17	1	17	5			40
Wheat			2		1	4	19	3	29
Hay		1	1	3	5	2	7	1	20
Apples									
Potatoes					1				1
Other vegetables			2			14		2	22
Cattle	3		39			33	1	10	86
Horses and mules			3			2		1	6
Sheep	179		170			73		292	713
Total	181	1	241	4	24	133	27	309	920

2396

1922 Commodity	Payette County										Washington County				
	Falks	Washoe	Ingard	New Plymouth	Payette	Effie	Buckingham	Wood	Fruitland	Total	Feltham	Welser	Jonathan	Crystal	Total
Barley					3					3		1			1
Corn												1			1
Oats				1	1					2					
Wheat	6			30	19	1	12		5	82		46			47
Flour					25					25		207		2	209
Bran												36			36
Other mill products					1					1					
Hay												51			51
Apples	7	19	12	243	259	37	45	66	239	927	133	42	81	11	268
Fruit, dried				4	14					18		5			
Prunes	9	12		40	92	12	6	40	38	247	2	27	3	56	88
Canned goods					5					5		1			1
Potatoes				5	37		19		12	73	1	35			36
Other vegetables				1	1	54		10	17	83		19		6	25
Other green fruit	4	1		2	8			1		16		5			5
Cattle				20	91				1	112		98			98
Hogs				13	17					30		16			16
Horses and mules				1	3					4		8			8
Sheep				25	36					61		77			77
Total	26	12	12	394	612	104	82	117	310	1,689	136	675	84	75	

1921

2397

Commodity	Ada County								Boise County			
	Orchard	Kuna	Boise	Perkins	Beatty	Meridian	Sonna	Total	Horseshoe Bend	Gardena	Banks	Total
Barley						1		1				
Corn												
Oats						1		1	1			1
Wheat		56	22	24	15	108		225		2		2
Flour						1		1				
Bran												
Other mill prod			1					1				
Hay		110					2	112				
Apples	1	60	56	18	89	21	3	248				
Fruit, dried			6			13		19				
Prunes		16	51	75	114	243	7	506				
Canned goods			2			1		3				
Potatoes		3	1	6		1		11				
Other vegts			25			2		27				
Other green fruit							2	2				
Cattle		7	16			21		44	25	1	17	43
Hogs		1	3			1		5	1		3	4
Horses and mules			23					23	1		1	2
Sheep		14	34			37		85	19		4	23
Total	1	267	240	123	218	451	14	1,314	47	3	25	75

Shipments from stations on the Oregon Short Line Railroad in ten southwestern counties of Idaho—Continued

1921—Continued

2398	Canyon County												
1921 Commodity	Callopy	Nampa	Noble	Maddens	Caldwell	Bowmont	Shelp	Melba	Notus	Middlton	Greenleaf	Stoddard	Tucker
Barley					1								
Corn		3							1				
Oats					2			1					
Wheat		144	2	2	113	39	2	24	26	17	17	4	2
Flour		124			65								
Bran		45			14								
Other mill prod		11						3					
Hay		4			62	24		97			37	95	
Apples		169	35		72	3	65			3	46		
Fruit, dried													
Prunes		58	13	6	20	5	4			11			
Canned goods		1	2										
Potatoes	3	328			238	108	4	182		2	35	184	
Other vegts		51			4			15		2		29	
Other green fruit		5											
Cattle		181			146			12	1	10			
Hogs	1	17			31			1	1		1		1
Horses and mules		5			16								
Sheep		59			137			6	1	2			
Total	4	1,205	52	8	921	179	75	341	30	47	136	312	3

2399	Canyon County—Continued						Owyhee County			
1921 Commodity	Warrens	Allendale	Wilder	Parma	Apple Valley	Total	Murphy	McCoard	Homedale	Total
Barley				1		2			1	1
Corn			3	1		8				
Oats				1		4				
Wheat		13	47	90	5	547	2	4	40	46
Flour			2			191				
Bran			1			60				
Other mill prod			2			16				
Hay	35	81	46	46	2	529		19	110	129
Apples		12	2	175	264	846			33	33
Fruit, dried				3		3				
Prunes		3	20	88	6	234			22	22
Canned goods						3				
Potatoes	246	138	192	256	1	1,917	1	20	56	77
Other vegts			7	26		134			1	1
Other green fruit			1			6			1	1
Cattle			1	66		417	149		94	243
Hogs		1	18	32		104				
Horses & mules						21	1			1
Sheep			18	19		242	311		85	396
Totals	281	248	360	804	278	5,284	464	43	443	950

Shipments from stations on the Oregon Short Line Railroad in ten southwestern countries of Idaho—Continued

1921—Continued

2400

1921 Commodity	Elmore County			Gem County				
	Mountain Home	Sunnyside	Totals	Bramwell	Emmett	Letha	Montour	Totals
Barley						3		3
Corn	1		1					
Oats					1			1
Wheat	4	1	5		19	17	14	50
Flour							2	2
Bran								
Other mill prod								
Hay					32	3	1	33
Apples				25	270	31	2	328
Fruit, dried								
Prunes					168	5		173
Canned goods								
Potatoes						2		2
Other vegts				25	68	15		108
Other green fruit					13			13
Cattle	54		54		38	36	34	108
Hogs					7	2	9	18
Horses & mules	2		2				1	1
Sheep	190	2	192		14	28	55	97
Totals	251	3	254	50	630	142	118	920

2401

1921 Commodity	Valley County							
	Smiths Ferry	Cascade	Timothy	Arling	Donnelly	Norwood	McCall	Totals
Barley								
Corn								
Oats		1		7				8
Wheat	1	1			5	17		24
Flour								
Bran								
Other mill prod								
Hay		2	1	11	6			20
Apples								
Fruit, dried								
Prunes								
Canned goods								
Potatoes								
Other vegts								
Green fruit								
Cattle	4	30			20	4	16	74
Hogs								
Horses & mules		1		3			1	5
Sheep	154	112					237	503
Totals	159	147	1	21	31	21	254	634

Shipments from stations on the Oregon Short Line Railroad in ten southwestern countries of Idaho—Continued

1921—Continued

2402

1921 Commodity	Payette County										Washington County					
	Falks	Washoe	Ingard	New Plymouth	Payette	Effie	Buckingham	Wood	Fruitland	Totals	Feltham	Weiser	Jonathan	Crystal	Eaton	Totals
Barley					1					1		9	1			10
Corn					1					1		1				1
Oats												1				1
Wheat	2			36	34		4		6	72		81	3			84
Flour					25					25		139				139
Bran				1	1					2		25	2			27
Other mill prod					7					7		7				7
Hay					4		9		1	14		25				25
Apples	8	101	88	423	365	103	113	161	515	1,877	187	108	83	39		417
Fruit, dried				2	13					15		2				2
Prunes	1	19	2	64	149	11	19	196	56	517		6	3	32		41
Canned goods					15				4	19						
Potatoes				2	7		9	1	5	24						
Other vegts					1			9		10		6		5		11
Green fruit				1	2			2	1	6		3				3
Cattle				30	95					125		142			1	143
Hogs				4	8					12		7				7
Horses & mules				1						1		13				13
Sheep		1			55					56		128		2		130
Totals	11	121	90	554	783	114	154	369	588	2,784	187	703	92	78	1	1,061

2403 *Exhibit No. 7*

By Samuel L. Newton, witness for P. U. C. I.

I. C. C. docket No. 19680

Before the Interstate Commerce Commission

I. C. C. docket No. 19680

PUBLIC SERVICE COMMISSION OF OREGON

vs.

CENTRAL PACIFIC RAILWAY COMPANY ET AL.

Exhibit of the Public Utilities Commission of Idaho

POPULATION OF TEN SOUTHWESTERN IDAHO COUNTIES.—RECEIPTS OF VARIOUS COMMODITIES FROM POINTS OF ORIGIN AS SHOWN

2404 Carload freight received from North Pacific points west of the Cascade Mountains, and also from California points that might route over proposed railroad across Oregon as reported monthly on O. S. L. R. R. Form 1694 for stations named, for the year 1927.

Record is not complete, but is compiled from those reports that had been sent to office of Joel L. Priest, genl. agent, Boise.

Routing for Oregon and Washington points is shown as O. W. R. & N. from California points as RR O.-W. R. & N. or SS O.-W. R. N., indicating that shipment moved all rail (RR) or by steamship (SS) to Portland and Oregon-Washington Railroad & Navigation Company to destination. Other California shipments are shown as routing via Salt Lake City, Ogden, or Wells.

2405 *Idaho census, 10 southwestern counties*

County	1910, U. S. Government	1920, U. S. Government	1927, Rand-McNally, estimate	County	1910, U. S. Government	1920, U. S. Government	1927, Rand-McNally, estimate
Ada	29,088	35,213	37,423	Payette		7,021	7,027
Adams		2,966	3,077	Valley		2,524	2,742
Boise	5,250	1,822	1,979	Washington	11,101	9,424	9,775
Canyon	25,323	26,932	29,256				
Elmore	4,785	5,087	5,197	Total, 10 counties	79,591	102,110	108,987
Gem		6,427	6,981	State of Idaho	325,594	431,866	534,000
Owyhee	4,044	4,694	4,930				

2406 *Received at Boise*

Origin	Routing		Commodity
January, 1927:			
Dishman, Wash		O.-W. R. N.	Cabbage.
Portland, Ore		"	Vegetables.
Keys, Calif		Ogden	S. spuds.
Brawley, Calif		"	Lettuce.
Atwater, Calif		"	S. spuds.
Sacramento, Calif		"	Vegetables.
Willabridge, Ore		O.-W. R. N.	Gaso.-oil.
San Francisco, Calif	SS	"	Sugar.
Portland, Ore		"	Canned fruit and vegts.
Willabridge, Ore		"	Gaso.
West Linn, Ore		"	Newsprint.
San Francisco, Calif	SS	"	Fruit extracts.
Willabridge, Ore		"	Gaso.
Albina, Ore		"	Plaster work.
Portland, Ore		"	Rope.
Bandita, Calif		Ogden	Vegetables.
Portland, Ore		O.-W. R. N.	Cereals.
San Francisco, Calif	SS	"	Sugar.
Portland, Ore		"	Coffee in tin.
Oakland, Calif	SS	"	Soap.
San Francisco, Calif	SS	"	Canned fish.
Portland, Ore		"	Canned goods.
San Francisco, Calif	SS	"	Coffee.
Oregon City, Ore		"	Wrapping paper.
Parafina, Calif	RR	"	Roofing.
Penensula, Ore		"	Fir lumber.
Melrose, Calif	RR	"	Autos.
" "	RR	"	"
" "	RR	"	"
" "	RR	"	"
" "	RR	"	"
" "	RR	"	"
" "	RR	"	"
Portland, Ore		"	Stock feed.
Seattle, Wash		"	Ice machinery.
Millwood, Wash		"	Newsprint.
Portland, Ore		"	Bathtubs.
Camas, Wash		"	Wrapping paper.
Portland, Ore		"	Canned fruit & vegts.
San Francisco, Calif	SS	"	Sugar.
Portland, Ore		"	Granite blocks.
San Francisco, Calif	SS	O.-W. R. N.	Spray.
San Francisco, Calif	SS	"	Sugar.
San Francisco, Calif	SS	"	Tea.
Fresno, Calif	RR	"	Raisins.

Received at Boise—Continued

Origin	Routing	Commodity
February, 1927:		
Spokane, Wash.	O.-W. R. N.	Crackers.
Wanna, Ore.	"	Fir lumber.
East Portland, Ore.	"	Autos.
Millwood, Wash.	"	Newsprints.
Maycer, Ore.	"	Cedar shingles.
Melrose, Calif.	RR "	Autos.
San Francisco, Calif.	SS "	Sugar.
Camas, Wash.	"	Wrapping paper.
San Francisco, Calif.	SS "	Com. glass.
San Francisco, Calif.	SS "	Paint.
Oakland, Calif.	SS "	Dry paint.
Willabridge, Ore.	"	Gaso.
West Lima, Ore.	"	Newsprint.
Portland, Ore.	"	Steel bars.
East Portland, Ore.	"	Agri. implements.
El Centro, Calif.	Ogden	Lettuce.
San Francisco, Calif.	RR O.-W. R. N.	Barbed wire.
2407 Linton, Ore.	O.-W. R. N.	Barbed wire.
San Francisco, Calif.	SS "	Kalsomine.
N. Portland, Ore.	"	Dressed meats.
San Francisco, Calif.	SS "	Asphalt.
Portland, Ore.	"	Lub. oil & grease.
Willabridge, Ore.	"	Gaso.
Camas, Wash.	"	Paper.
Livingston, Calif.	Ogden	Sweet spuds.
N. Portland, Ore.	O.-W. R. N.	Fertilizer.
Richmond, Calif.	SS "	Lub. oil.
Willabridge, Ore.	"	Gaso.
" "	"	"
" "	"	"
" "	"	Lub. oil.
March, 1927:		
Portland, Ore.	O.-W. R. N.	Cereals.
Oakland, Calif.	SS "	Soap.
Melrose, Calif.	RR "	Autos.
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
Seattle, Wash.	"	Plaster board.
Mayger, Ore.	"	Cedar shingles.
Oakland, Calif.	SS "	Asphalt.
Millwood, Wash.	"	Newsprint.
Monzea, B. C.	"	Cedar posts.
Albina, Ore.	"	Oyster shell.
San Francisco, Calif.	SS "	Sugar.
San Francisco, Calif.	SS "	Sugar.
Oakland, Calif.	SS "	Soap.
Portland, Ore.	"	Coffee.
San Francisco, Calif.	SS "	Green coffee.
Puyallap, Wash.	"	P. fruit.
Leandio, Calif.	RR "	Tractors.
E. Portland, Ore.	"	Autos.
E. Portland, Ore.	"	Autos.
E. Portland, Ore.	"	"
Portland, Ore.	"	Stock food.
Seattle, Wash.	"	Fir lumber.
Portland, Ore.	"	Roofing paper.
Gresham, Ore.	"	Fir lumber.
Locke, Wash.	"	Cedar posts.
Van Noys, Calif.	RR "	Pipe organs.
Seattle, Wash.	"	Wood pipe.
Seattle, Wash.	"	Structural steel.
Linnton, Ore.	"	Fir lumber.
Linnton, Ore.	"	Fir lumber.
San Francisco, Calif.	SS "	Sugar.
San Francisco, Calif.	SS "	"
" " "	SS "	"
" " "	SS "	"
Chico, Calif.	RR "	Matches.
Albina, Ore.	"	Cereals.

Received at Boise—Continued

Origin	Routing	Commodity
March, 1927—Continued.		
Portland, Ore	O.-W. R. N	Canned fruit and vegetables.
" "	"	" " " "
Portland, Ore	"	Box shooks.
" "	"	Fuel oil.
Willabridge, Ore	"	Gaso.
Alina, Ore	"	Fir doors.
2408 Portland, Ore	O.-W. R. N	S. doors.
Willabridge, Ore	"	Gaso.
" "	"	"
" "	"	"
" "	"	"
" "	"	"
N. Portland, Ore	"	Shingles.
Elmhurst, Calif	RR "	Autos.
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
San Francisco, Calif	SS "	Insecticide.
Portland, Ore	"	Mtg. tin cans.
Priest River, Idaho	"	Cedar posts.
West Linn, Oreg	"	Asphalt.
Richmond, Calif	RR "	Newsprint.
Richmond, Calif	RR "	Asphalt.
Richmond, Calif	RR "	"
Hood River, Oreg	"	Sprays.
San Francisco, Calif	SS "	Age. springs.
West Linn, Ore	"	Newsprint.
San Francisco, Calif	SS "	Sugar.
Portland, Ore	"	Sugar.
Willabridge, Ore	"	Lub. oil.
" "	"	Ref. pet.
" "	"	Gaso.
Everett, Wash	"	Cedar shingles.
East Portland, Ore	"	Stock foods.
Willabridge, Ore	"	Gaso.
" "	"	Gaso.
" "	"	Gaso.
" "	"	"
" "	"	"
April, 1927:		
Ione, Wash	"	Cedar posts.
Fresno, Calif	RR "	D. fruit.
Oakland, Calif	SS "	Soap.
Portland, Ore	"	Canned fruit and vegetables.
" "	"	" " " "
San Francisco, Calif	SS "	Sugar.
" " "	SS "	"
Portland, Ore	"	Coffee.
San Francisco, Calif	SS "	Sugar.
" "	SS "	Beans.
Melrose, Calif	RR "	Autos.
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
Aberdeen, Wash	"	Cedar shingles.
Linnton, Ore	"	Fir lumber.
"	"	Fir lumber.
Seattle, Wash	"	Sash mfg.
Watsonville, Calif	SS "	Spray em.
" "	SS "	" "
" "	SS "	" "
San Francisco, Calif	RR "	Chairs.
2409 Millwood, Wash	"	Newsprint.
Portland, Ore	"	Autos.
Everett, Wash	"	Cedar shingles.
Oleum, Calif	Wells	Lub. oil.
Willabridge, Ore	O.-W. R. N	Gaso.
San Francisco, Calif	SS "	Sugar.
" " "	SS "	Sugar.
" " "	SS "	Sugar.

Received at Boise—Continued

Origin	Routing	Commodity
April, 1927—Continued.		
Portland, Ore.	O.-W. R. N.	Canned fruit & vegetables.
San Francisco, Calif.	SS	Sugar.
" "	SS	Canned fruit & vegetables.
Portland, Ore.		Roofing paper.
" "		Com. doors.
Paraffine, Calif.	RR	Building paper.
Portland, Ore.	RR	Fir lumber.
Ione, Wash.		Cedar posts.
Portland, Ore.		Gaso.
" "		"
" "		"
" "		"
" "		"
" "		"
Melrose, Calif.	RR	Autos.
West Linn, Ore.		Newsprint.
Portland, Ore.		Paints.
Elmhurst, Calif.	RR	Autos.
San Francisco, Calif.	SS	Granite rock.
Vancouver, Wash.		"
Richmond, Calif.	SS	Paper roofing.
" "	RR	Asphalt.
Willabridge, Ore.		Fuel oil.
Milrose, Calif.	RR	Road oil.
Richmond, Calif.	RR	Asphalt.
Portland, Ore.		Cereal bev.
Tacoma, Wash.		Mixed furniture.
Willabridge, Ore.		Gaso.
" "		"
" "		"
" "		"
Portland, Ore.		Lub. grease.
Portland, Ore.		Sugar.
San Francisco, Calif.	SS	Sugar.
Army Point, Calif.	RR	Ammunition.
Willabridge, Ore.		Gasso.
" "		"
" "		"
" "		"
" "		"
Portland, Ore.		Stock food.
Portland, Ore.		Cereals.
May, 1927:		
Portland, Ore.		Cereals.
Portland, Ore.		Canned fruits and vegts.
San Francisco, Calif.	SS	Green coffee.
San Francisco, Calif.	SS	Sugar.
San Francisco, Calif.	SS	Suga..
Gresham, Ore.		Wrapping paper.
Oakland, Calif.	SS	Laundry soap.
Portland, Ore.		Green coffee.
San Francisco, Calif.	SS	Binding twine.
Paraffine, Calif.	RR	Prep. roofing.
Richmond, Calif.	SS	Asphalt shingles.
Linnton, Ore.		Fir lumber.
2410 Linton, Ore.	O.-W. R. N.	Fir lumber.
" "		" "
" "		" "
" "		" "
" "		" "
" "		" "
Hauma, Ore.		Fir lumber.
Kelso, Wash.		Cedar shingles.
Melrose, Calif.	RR	Autos.
" "	RR	"
" "	RR	"
" "	RR	"
" "	RR	"
" "	RR	"
" "	RR	"
" "	RR	"
" "	RR	"
Port Stock Yards, Ore.		Cedar shingles.
Raymond, Wash.		Fir lumber.
San Francisco, Calif.	SS	Sugar.
" "	SS	Sugar.
	SS	Canned fruit and vegetables.
Albina, Ore.		Rolled oats.
Willabridge, Ore.		Gaso.
" "		"

Received at Boise—Continued

Origin	Routing		Commodity
May, 1927—Continued.			
Seattle, Wash.		O.-W. R. N.	Earth paint.
West Linn, Ore.		"	Newsprint.
" "		"	"
Willabridge, Ore.		"	Gaso.
" "		"	"
" "		"	"
" "		"	"
" "		"	"
Elmhurst, Calif.	RR	"	Autos.
Elmhurst, Calif.	RR	"	"
" "	RR	"	"
San Francisco, Calif.		Salt Lake City	Mty. bottles.
Albina, Ore.		O.-W. R. N.	Steel bars.
San Francisco, Calif.	RR	"	Asphalt.
Willabridge, Ore.		"	Gaso.
" "		"	"
" "		"	"
" "		"	"
" "		"	"
Portland, Ore.		"	Stoves and ranges.
West Lynn, Ore.		"	Wrapping paper.
Portland, Ore.		"	Hay.
Sacramento, Calif.		Ogden	Vegetables.
" "		"	"
" "		"	"
" "		"	"
" "		"	"
" "		"	"
Sacramento, Calif.		Ogden	Vegetables.
" "		"	"
Olympia, Wash.		O.-W. R. N.	Cedar shingles.
Sacramento, Calif.		Ogden	Vegetables.
" "		"	"
Willabridge, Ore.		O.-W. R. N.	Gaso.
" "		"	"
" "		"	"
" "		"	Lub. oil.
2411 Sacramento, Calif.		Ogden	Vegetables.
" "		"	"
Olympia, Wash.		O.-W. R. N.	Cedar shingles.
Sacramento, Calif.		Ogden	Vegetables.
" "		"	"
Willabridge, Ore.		O.-W. R. N.	Gaso.
" "		"	"
" "		"	"
Willabridge, Ore.		"	Lub. oil.
San Francisco, Calif.	SS	"	Sugar.
Portland, Ore.		"	Oyster shell.
" "		"	Stock food.
June, 1927:			
San Francisco, Calif.	RR	O.-W. R. N.	Ladders.
" "	RR	"	Tractors.
Linnton, Ore.		"	Fir lumber.
E. Portland, Ore.		"	"
Portland, Ore.		"	Meal.
St. Johns, Ore.		"	Building material.
Melrose, Calif.	RR	"	Autos.
Portland, Ore.		"	Plumbing.
Portland, Ore.		"	Oats.
" "		"	Canned goods.
" "		"	"
Parafine, Calif.	RR	"	P. paper.
San Francisco, Calif.	SS	"	Sugar.
Parafine, Calif.	RR	"	Roofing.
Olympia, Wash.		"	Canned fruit.
Albina, Ore.		"	Paper.
San Francisco, Calif.	SS	"	Sugar.
" "	SS	"	Sugar.
Portland, Ore.		"	Gaso.
" "		"	"
" "		"	"
Portland, Ore.		"	Fir doors.
Willabridge, Ore.		"	Gaso.
" "		"	"
" "		"	"
" "		"	"
" "		"	"
San Francisco, Calif.		Wells	Bottles.
Elmhurst, Calif.	RR	O.-W. R. N.	Autos.

Received at Boise—Continued

Origin	Routing		Commodity
June, 1927—Continued.			
San Francisco, Calif.	SS	O.-W. R. N.	Ammunition.
Portland, Ore.		"	Tinware.
" "		"	Paint.
Oakland, Calif.	SS	"	Soap.
Albina, Ore.		"	Malt.
Vancouver, B. C.		"	Granite.
Oakland, Calif.	SS	"	Roofing.
Albina, Ore.		"	Kalsomine.
Sacramento, Calif.		Ogden	Mixed vegetables.
" "		"	" "
Oregon City, Ore.		"	Paper.
Portland, Ore.		"	Pipe.
Nichols, Calif.	SS	"	Insecticide.
Oakland, Calif.	SS	"	Soap.
Portland, Ore.		"	Sugar.
West Linn, Ore.		"	Paper.
Willabridge, Ore.		"	Gaso.
" "		"	"
" "		"	"
2412 " "		O.-W. R. N.	Gaso.
" "		"	"
San Francisco, Calif.	SS	"	Oil.
Richmond, Calif.		Wells	Gaso.
Willabridge, Ore.		O.-W. R. N.	Oil.
Richmond, Calif.	SS	"	Oil.
Willabridge, Ore.		"	Gaso.
" "		"	"
" "		"	"
" "		"	"
" "		"	"
July, 1927:			
Portland, Ore.		O.-W. R. N.	Cereals.
Linnton, Ore.		"	Fir lumber.
" "		"	" "
" "		"	" "
Parafine, Calif.	RR	"	Roofing.
East Portland, Ore.		"	Stationary.
Tacoma, Wash.		"	Wtg. tablets.
Camas, Wash.		"	Paper.
Linnton, Ore.		"	Fir lumber.
Portland, Ore.		"	Canned fruit & vegts.
" "		"	" " "
San Francisco, Calif.	SS	"	Sugar.
" " "	SS	"	Sugar.
Seattle, Wash.		"	Canned goods.
San Francisco, Calif.	SS	"	Sugar.
San Francisco, Calif.	SS	"	Sugar.
" " "	SS	"	Coffee.
Oregon City, Ore.		"	Wrapping paper.
Melrose, Calif.	RR	"	Autos.
Melrose, Calif.	RR	"	Autos.
Seattle, Wash.		"	Plaster board.
Everett, Wash.		"	Shingles.
San Francisco, Calif.	SS	"	Agri. implements.
Albina, Ore.		"	Steel.
San Francisco, Calif.	SS	"	Paints.
Wilcox, Calif.		Ogden	Den. alcohol.
San Francisco, Calif.	SS	O.-W. R. N.	Boots and shoes.
San Francisco, Calif.	SS	"	Canned goods.
" " "	SS	"	Sugar.
" " "	SS	"	Sugar.
" " "	SS	"	Sugar.
" " "	SS	"	"
" " "	SS	"	"
Portland, Ore.		"	Canned fruit & vegt.
Albina, Ore.		"	Cereals.
San Francisco, Calif.	SS	"	Sugar.
Parafine, Calif.	RR	"	Roofing.
San Francisco, Calif.	SS	"	Small ammunition.
West Linn, Ore.		"	Newsprint.
Portland, Ore.		"	Gaso.
" "		"	"
" "		"	"
" "		"	"
" "		"	"
" "		"	"
" "		"	"
Portland, Ore.		"	Bake Ovens.
San Francisco, Calif.	SS	"	Old bags.

Received at Boise—Continued

Origin	Routing	Commodity
July, 1927—Continued.		
Tacoma, Wash.	O.-W. R. N.	Cross arms.
2413 Lincoln, Calif.	Ogden	Brick.
West Linn, Ore.	O.-W. R. N.	Newsprint.
Richmond, Calif.	SS	Asphalt.,
" "	SS	"
" "	SS	"
Portland, Ore.		Cereal bev.
Merced, Calif.	Ogden	Green tomatoes.
Merced, Calif.		" "
" "		" "
Seattle, Wash.		Lettuce.
" "		"
Merced, Calif.	Ogden	Green tomatoes.
Delano, Calif.		Watermelons
" "		"
" "		"
Melrose, Calif.	Ogden	Watermelons.
Willabridge, Ore.	O.-W. R. N.	Gaso.
" "		Gaso.
Oakland, Calif.	SS	Mining machinery.
Cosmopolis, Wash.		Box shook.
Brawley, Calif.	Ogden	Cantaloupes.
Shamrock, Calif.		Watermelons.
Willabridge, Ore.	O.-W. R. N.	Gaso.
" "		"
" "		"
" "		"
" "		"
" "		"
Albina, Ore.		New furniture.
San Francisco, Calif.	SS	Sugar.
Cotland, Ore.		Soaps.
Albina, Ore.		Oyster shell.
Beavers Creek, Ore.		Fir lumber.
Richmond, Calif.	SS	Lub. oil.
Willabridge, Ore.		Gaso.
" "		"
" "		"
" "		"
" "		"
September, 1927:		
Portland, Ore.	O.-W. R. N.	Cereals.
Fenlock, Calif.	Ogden	Sweetpotatoes.
Brooklyn, Ore.	O.-W. R. N.	Stove fixtures.
Gazasebo, Ore.		Fir lumber.
Parafine, Calif.	RR	Roofing.
Elmhurst, Calif.	RR	Autos.
Seattle, Wash.		Structural steel.
" "		"
Melrose, Calif.	RR	Autos.
" "	RR	"
" "	RR	"
" "	RR	"
" "	RR	"
" "	RR	"
" "	RR	"
" "	RR	"
" "	RR	"
San Francisco, Calif.	SS	Cane sugar.
" "	SS	" "
" "	SS	" "
" "	SS	" "
" "	SS	" "
" "	SS	" "
" "	SS	" "
2414 " "	SS	Oregon-W. R. N. Cane sugar.
" "	SS	Tea.
Seattle, Wash.		Canned salmon.
Portland, Ore.		Ro. coffee.
San Francisco, Calif.	SS	Green coffee.
DaLeandre, Calif.	RR	Tractors.
" "	RR	"
Portland, Ore.		Stock food.
Elmhurst, Calif.	RR	Autos.
" "	RR	"
Seattle, Wash.		Plaster board.
Linnton, Ore.		Fir lumber.
Oregon City, Ore.		Wrapping paper.
Portland, Ore.		Canned fruit and vegts.
San Francisco, Calif.	SS	Cane sugar.
" "	SS	" "
" "	SS	" "

Received at Boise—Continued

Origin	Routing	Commodity
September, 1927—Continued.		
San Francisco, Calif.	SS Oregon-W. R. N.	Cane sugar.
" "	SS "	" "
" "	SS "	" "
" "	SS "	" "
Portland, Ore.	"	Canned pineapple.
San Francisco, Calif.	SS "	Paint and lead.
Willabridge, Ore.	"	Gaso.
" "	"	"
" "	"	"
" "	"	"
" "	"	"
" "	"	"
" "	"	"
" "	"	"
Richmond, Calif.	RR "	Lub. oil.
West Linn, Ore.	"	Newsprint.
San Francisco, Calif.	SS "	Sugar.
Portland, Ore.	"	B. wire and fencing.
" "	"	Flower pots.
Turlock, Calif.	Salt Lake	Sweetpotatoes.
Sacramento, Calif.	Ogden	Grapes.
West Linn, Ore.	O. W. R. N.	Newsprint.
Albina, Ore.	"	New furniture.
Willabridge, Ore.	"	Gaso.
" "	"	"
" "	"	"
" "	"	"
" "	"	"
Willabridge, Ore.	"	Lub. oil.
" "	"	"
Portland, Ore.	"	Building material.
San Francisco, Calif.	SS "	Sugar.
" "	SS "	Meuriatic acid.
Willabridge, Ore.	"	Gaso.
" "	"	"
" "	"	"
" "	"	"
" "	"	"
" "	"	"
2415 Brooklyn, Ore.	O. W. R. N.	Store fixtures.
Sacramento, Calif.	RR "	Almonds.
Parafine, Calif.	RR "	Paper roofing.
Seattle, Wash.	"	Toilet paper.
Oregon City, Ore.	"	Wrapping paper.
Fresno, Calif.	Salt Lake	Dried fruit.
San Francisco, Calif.	SS O. W. R. N.	Sugar.
Portland, Ore.	"	Soup, canned.
" "	"	Ro. coffee.
Tacoma, Wash.	"	Wood pipe.
Melrose, Calif.	RR "	Autos.
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
" "	RR "	"
Millwood, Wash.	"	Newsprint.
Dupont, Wash.	"	Black powder.
Linnton, Ore.	"	Fir lumber.
Tacoma, Wash.	"	Shingles.
Elmhurst, Calif.	RR "	Autos.
San Francisco, Calif.	SS "	Sugar.
" "	SS "	Sugar.
" "	SS "	Sugar.
" "	SS "	Sugar.
Albina, Ore.	"	Cereals.
Portland, Ore.	"	Canned vegts. and fruit.
" "	"	" " "
Portland, Ore.	"	Dried apricots.
" "	"	" "
Brooklyn, Ore.	"	Store fixtures.
Bald, Calif.	Ogden	Den. alcohol.
Willabridge, Ore.	O. W. R. N.	Gaso.
" "	"	"
" "	"	"
" "	"	"
" "	"	"

Received at Boise—Continued

Origin	Routing	Commodity
September, 1927—Continued.		
Portland, Ore.	O. W. R. N.	Jute bags.
PeEll, Wash.	"	Lumber.
West Linn, Ore.	"	Newsprint.
" "	"	" "
" "	"	" "
Tacoma, Wash.	"	Matches.
Oakland, Calif.	SS "	Clorax.
Portland, Ore.	"	Structural steel.
" "	"	" "
" "	"	" "
Richmond, Calif.	RR "	Asphalt.
" "	RR "	Asphalt.
" "	RR "	Asphalt.
Oakland, Calif.	SS "	P. roofing.
Agnew, Calif.	Ogden	Den. alcohol.
Tacoma, Wash.	O. W. R. N.	New furniture.
Tulock, Calif.	Salt Lake	Sweetpotatoes.
Livingston, Calif.	Ogden	Sweetpotatoes.
Keys, Calif.	Ogden	"
Grants Pass, Ore.	RR O. W. R. N.	Grapes.
Sugar, Calif.	Ogden	Table grapes.
Reedley, Calif.	"	Grapes.
Willbridge, Ore.	"	Lub. oil.
" "	"	" "
Richmond, Calif.	RR O. W. R. N.	Gaso.
2416 Willabridge, Ore.	O.-W. R. N.	Gaso.
" "	"	"
" "	"	"
" "	"	"
" "	"	"
" "	"	"
" "	"	"
San Francisco, Calif.	SS "	Green coffee.
" "	SS "	Sugar.
Fresno, Calif.	Salt Lake	Dried fruit.
Tacoma, Wash.	O.-W. R. N.	Matches.
Willabridge, Ore.	"	Gaso.
" "	"	"
" "	"	"
" "	"	"
" "	"	"
November, 1927:		
Brooklyn, Ore.	O.-W. R. N.	Stove fixtures.
Portland, Ore.	"	Canned vegts. and fruit.
Porterville, Calif.	Ogden	Oranges.
Linnton, Ore.	O.-W. R. N.	Fir lumber.
N. Puyallup, Wash.	"	Dreid fruit and fish.
San Francisco, Calif.	SS "	Sugar.
" "	SS "	"
" "	SS "	"
Parafine, Calif.	Wells	Rug linoleum.
Fresno, Calif.	Salt Lake	Dried fruit.
San Francisco, Calif.	SS O.-W. R. N.	Beans.
" "	SS "	Sugar.
Portland, Ore.	"	Ro. coffee.
Kent, Wash.	"	Canned goods.
E. Portland, Ore.	"	Canned fruit.
" "	"	" "
Melrose, Calif.	RR "	Autos.
" "	RR "	"
" "	RR "	"
Parafine, Calif.	RR "	Asp. roofing.
Everett, Wash.	"	Cedar shingles.
Seattle, Wash.	"	Plaster board.
Portland, Ore.	"	Stock food.
Seattle, Wash.	"	Structural steel.
Elmhurst, Calif.	RR "	Autos.
Atwater, Calif.	Ogden	Sweetpotatoes.
Raymond, Wash.	O.-W. R. N.	Fir lumber.
Millwood, Wash.	O.-W. R. N.	Newsprint.
Linnton, Ore.	"	Gaso.
Oleum, Calif.	RR "	Lub. oil.
Dundee, Ore.	"	Walnuts.
Portland, Ore.	"	Cereals.
San Francisco, Calif.	SS "	Canned fruit and vegts.
Lampoe, Calif.	Ogden	White beans.
Seattle, Wash.	O.-W. R. N.	Canned soup.
Brooklyn, Ore.	"	Store fixtures.
San Francisco, Calif.	SS "	Sugar.
" "	SS "	Sugar.
Kenton, Ore.	"	Fire doors.
Takoma, Wash.	"	" "

Received at Boise—Continued

Origin	Routing	Commodity
November, 1927—Continued.		
Albina, Ore.	O.-W. R. N.	Rolled oats.
Willabridge, Ore.	"	Gaso.
" "	"	"
" "	"	"
" "	"	"
Seattle, Wash.	"	"
" "	"	"
2417 Dupont, Wash.	"	High explosives.
Richmond, Calif.	RR "	Bathtubs and fixtures.
Aberdeen, Wash.	"	Woodenware.
W. Linn, Ore.	"	Newsprint.
" "	"	"
Linnton, Ore.	"	Fir lumber.
E. Portland, Ore.	"	Agri. implements.
Portland, Ore.	"	Metal L. plates.
Willabridge, Ore.	"	Fuel oil.
Richmond, Calif.	RR "	Asphalt.
" "	RR "	"
" "	RR "	"
Arena, Calif.	Ogden	Sweetpotatoes.
" "	Ogden	"
Turlock, Calif.	Salt Lake	"
" "	" "	"
Livingston, Calif.	Ogden	"
San Francisco, Calif.	SS O.-W. R. N.	Sugar.
Wallabridge, Ore.	"	Gaso.
" "	"	"
" "	"	"
" "	"	"
" "	"	"
" "	"	"
Willabridge, Ore.	"	Lub. oil.
" "	"	Grease.
No. Portland, Ore.	"	Stock feed.
Willabridge, Ore.	"	Gaso.
" "	"	Gaso.
" "	"	"
" "	"	"
" "	"	"
" "	"	"
Willabridge, Ore.	"	Lub. oil.
" "	"	Refined oil.
San Francisco, Calif.	SS "	Lub. oil.
December, 1927:		
Lindsay, Calif.	Ogden	Oranges and lemons.
Portland, Ore.	O.-W. R. N.	Cereals.
Ivanhoe, Calif.	Ogden	Oranges and lemons.
Cazadaro, Ore.	O.-W. R. N.	Fir lumber.
Fawn, Ore.	"	"
Lennton, Ore.	"	Wrapping paper.
Kelso, Wash.	"	Cedar shingles.
Linnton, Ore.	"	Fir lumber.
San Francisco, Calif.	SS "	Sugar.
Fresno, Calif.	Salt Lake	Raisins.
Portland, Ore.	O.-W. R. N.	Canned fruit and vegts.
" "	"	" " " "
San Francisco, Calif.	SS "	Coffee.
Melrose, Calif.	RR "	Autos.
" "	RR "	"
Linnton, Ore.	"	Pine lumber.
Portland, Ore.	"	Canned fruit and vegts.
San Francisco, Calif.	SS "	Sugar.
" "	SS "	Sugar.
" "	SS "	Sugar.
" "	SS "	Sugar.
Winlock, Wash.	"	Christmas trees.
Vancouver, B. C.	"	Granite.
Waldo, Calif.	Ogden	Den. alcohol.
San Francisco, Calif.	RR O.-W. R. N.	Mty. bottles.
2418 Linnton, Ore.	O.-W. R. N.	Newsprint.
West Linn, Ore.	"	"
Portland, Ore.	"	Steel bars.
Tacoma, Wash.	"	Cross arms.
Melrose, Calif.	Wells	Copper wire.
Fenlock, Wash.	O.-W. R. N.	Christmas trees.
Lemon Cove, Calif.	Ogden	Oranges and lemons.
Atwater, Calif.	"	Sweetpotatoes.
San Francisco, Calif.	"	Bananas.
Willabridge, Ore.	O.-W. R. N.	Gaso.
" "	"	"
" "	"	"
" "	"	"

Received at Boise—Continued

Origin	Routing	Commodity
December, 1927—Continued.		
Willabridge, Ore	O.-W. R. N.	Lub. oil.
Melrose, Calif	RR "	Road oil.
Willabridge, Ore	"	Gaso.
" "	"	Gaso.
" "	"	"
" "	"	"
Willamina, Ore	"	Fir trees.

2419 *Received at Weiser, Idaho*

Origin	Routing	Commodity
January, 1927:		
Seattle, Washington	O.-W. R. & N.	Shingles.
San Francisco, Calif	SS "	Soap.
The Dalles, Oregon (12)	"	Ties.
The Dalles, Oregon (6)	"	Ties.
The Dalles, Oregon (3)	"	Ties.
San Francisco, Calif	SS "	Sugar.
Portland, Oregon	"	Gasoline.
Melrose, Calif	RR "	Autos.
February, 1927:		
Portland, Oregon	O.-W. R. & N.	Autos.
San Francisco, Calif	SS "	Sugar.
The Dalles, Oregon (7)	"	Ties.
Portland, Oregon	"	P. food.
Melrose, Calif	RR "	Autos.
The Dalles, Oregon (6)	"	Ties.
San Francisco, Calif	SS "	Soap.
San Francisco, Calif	SS "	Soap.
The Dalles, Oregon (25)	"	Ties.
Portland, Oregon	"	Autos.
Portland, Oregon	"	Autos.
San Francisco, Calif	SS "	Sugar.
March, 1927:		
Richmond, Calif	RR O.-W. R. & N.	P. prod.
Portland, Oregon	"	Lumber.
Melrose, Calif	RR "	Autos.
Portland, Oregon	"	Autos.
Seattle, Washington	"	Canned goods.
Tacoma, Washington	"	Plty. food.
Stockton, Calif	RR "	Autos.
E. Portland, Oregon	"	Lumber.
Portland, Oregon	"	Autos.
Portland, Oregon	"	Autos.
San Francisco, Calif	SS "	Sugar.
April, 1927:		
Portland, Oregon	O.-W. R. & N.	Autos.
Portland, Oregon	"	Autos.
San Francisco, Calif	SS "	Sugar.
Portland, Oregon	"	Gasoline.
Melrose, Calif	RR "	Autos.
Wilbridge, Oregon	"	Gasoline.
San Francisco, Calif	SS "	Sugar.
Richmond, Calif	RR "	Road oil.
Richmond, Calif	RR "	Road oil.
Portland, Oregon	"	Autos.
San Francisco, Calif	SS "	Sugar.
Melrose, Calif	RR "	Autos.
San Francisco, Calif	SS "	Sugar.
San Francisco, Calif	SS "	Soap.
Portland, Oregon	"	Gasoline.
Wilbridge, Oregon	"	Gasoline.
Portland, Oregon	"	Gasoline.
Portland, Oregon	"	Autos.
2420 May, 1927:		
Albina, Oregon	O.-W. R. & N.	Oyster shells.
Oregon City, Oregon	"	Paper.
Stockton, Calif	RR "	Autos.
Melrose, Calif	RR "	Autos.
San Francisco, Calif	SS "	Sugar.
Portland, Oregon	"	Gasoline.
Willbridge, Oregon	"	Fuel oil.
San Francisco, Calif	SS "	Sugar.
Seattle, Washington	"	Canned goods.
San Francisco, Calif	SS "	Sugar.
Portland, Oregon	"	Canned goods.
Portland, Oregon	"	Chick feed.

Received at Weiser, Idaho—Continued

Origin	Routing			Commodity
May, 1927—Continued.				
Portland, Oregon		O.-W. R. & N.		Lumber.
Willibridge, Oregon		"		Gasoline.
Melrose, Calif.	RR	"		Autos.
Melrose, Calif.	RR	"		Autos.
San Francisco, Calif.	SS	"		Sugar.
Melrose, Calif.	RR	"		Autos.
San Francisco, Calif.	SS	"		Sugar.
San Francisco, Calif.	SS	"		Bags.
Willibridge, Calif.		"		Gasoline.
Melrose, Calif.	RR	"		Autos.
June, 1927:				
Eatonville, Washington		O.-W. R. & N.		Shingles.
Portland, Oregon		"		Pet. oil.
St. Johns, Oregon		"		Road oil.
Melrose, Calif.	RR	"		Autos.
San Francisco, Calif.	SS	"		Sugar.
San Francisco, Calif.	SS	"		Bags.
San Francisco, Calif.	SS	"		Sugar.
Willbridge, Oregon		"		Gasoline.
Portland, Oregon		"		Cereals.
July, 1927:				
Portland, Oregon		O.-W. R. & N.		B. twine.
San Francisco, Calif.	SS	"		Sugar.
San Francisco, Calif.	SS	"		Sugar.
San Francisco, Calif.	SS	"		Soap.
Portland, Oregon		"		Gasoline.
Willbridge, Oregon		"		Oil.
Melrose, Calif.	RR	"		Autos.
Linnton, Oregon		"		Lumber.
San Francisco, Calif.	SS	"		Sugar.
Wilibridge, Oregon		"		Gasoline.
San Francisco, Calif.	SS	"		Sugar.
Portland, Oregon		"		Gasoline.
Melrose, Calif.	RR	"		Autos.
2421 September, 1927:				
San Francisco, Calif.	SS	O.-W. R. & N.		Sugar.
San Francisco, Calif.	SS	"		Sugar.
Portland, Oregon		"		Gasoline.
San Francisco, Calif.	SS	"		Sugar.
Portland, Oregon		"		Gasoline.
Camp Lewis, Washington		"		High explo.
San Francisco, Calif.	SS	"		Sugar.
Portland, Oregon		"		Gasoline.
Melrose, Calif.	RR	"		Autos.
San Francisco, Calif.	SS	"		Sugar.
Portland, Oregon		"		Gasoline.
Fresno, Calif.	RR	"		Dried fruit.
San Francisco, Calif.	SS	"		Sugar.
Albina, Oregon		"		Oyster shells.
Portland, Oregon		"		Cereals.
San Francisco, Calif.	SS	"		Sugar.
San Francisco, Calif.	SS	"		Sugar.
Seattle, Washington		"		Canned goods.
Seattle, Washington		"		B. S. coal.
San Francisco, Calif.	SS	"		Sugar.
Albina, Oregon		"		Lye, etc.
Melrose, Calif.	RR	"		Autos.
Portland, Oregon		"		Grain bags.
Oakland, Calif.	SS	"		Soap.
Portland, Oregon		"		Gas.
San Francisco, Calif.	SS	"		Sugar.
Puyallup, Washington		"		Shooks.
Melrose, Calif.	RR	"		Autos.
Portland, Oregon		"		Gasoline.
October, 1927:				
Melrose, Calif.	RR	O.-W. R. & N.		Autos.
San Francisco, Calif.	SS	"		Sugar.
Portland, Oregon		"		Gasoline.
Linnton, Oregon		"		Lumber.
Melrose, Calif.	RR	"		Autos.
Portland, Oregon		"		Pity. food.
San Francisco, Calif.	SS	"		Soap.
Portland, Oregon		"		Canned goods.
Melrose, Calif.	RR	"		Autos.
Portland, Oregon		"		Lumber.
Portland, Oregon		"		Gasoline.
November, 1927:				
Melrose, Calif.	RR	O.-W. R. & N.		Autos.
Melrose, Calif.	RR	"		Autos.
Aberdeen, Washington		"		Shingles.
Portland, Oregon		"		Gasoline.
Fresno, California		Ogden		Dried fruit.

Received at Weiser, Idaho—Continued

Origin	Routing	Commodity
November, 1927—Continued.		
Seattle, Washington	O.-W. R. & N.	Canned goods.
San Francisco, Calif.	SS "	Sugar.
Portland, Oregon	"	Gasoline.
Portland, Oregon	"	Hogs.
Portland, Oregon	"	Cattle.
San Francisco, Calif.	SS "	Sugar.
Portland, Oregon	"	Gasoline.
Fresno, Calif.	RR "	Raisins.
2422 December, 1927:		
San Francisco, Calif.	SS O.-W. R. & N.	Sugar.
Portland, Oregon	"	Beans.
Portland, Oregon	"	Oil.
Seattle, Washington	"	Canned goods.
Marysville, Calif.	RR "	Oven.
Portland, Oregon	"	Gasoline.
Lindsay, Calif.	Ogden	Oranges.
Emeryville, Calif.	RR O.-W. R. & N.	Oven.
San Francisco, Calif.	SS "	Sugar.
Portland, Oregon	"	Canned goods.
Melrose, Calif.	RR "	Autos.
Melrose, Calif.	RR "	Autos.

2423 *Received at Payette, Idaho*

Origin	Routing	Commodity
January, 1927:		
Aberdeen, Washington	O.-W. R. & N.	Canned pears.
Melrose, Calif.	RR "	Autos.
E. Portland, Oregon	"	P. fred.
February, 1927:		
Blaine, Washington	O.-W. R. & N.	B. shooks.
San Francisco, Calif.	SS "	Acid.
Portland, Oregon	"	Sprayers.
Portland, Oregon	"	Fertilizer.
E. Portland, Oregon	"	Autos.
March, 1927:		
San Francisco, Calif.	SS O.-W. R. & N.	Ars. lead.
Portland, Oregon	"	Gasoline.
San Francisco, Calif.	SS "	Sugar.
Melrose, Calif.	RR "	Autos.
Melrose, Calif.	RR "	Autos.
E. Portland, Oregon	"	Spuds.
San Francisco, Calif.	SS "	Sulphur.
San Francisco, Calif.	SS "	Spray.
E. Portland, Oreg.	"	Autos.
San Francisco, Calif.	SS "	Insecticide.
April, 1927:		
Melrose, Calif.	RR O.-W. R. & N.	Autos.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR "	Autos.
Melrose, Calif.	RR "	Autos.
Melrose, Calif.	RR "	Autos.
Portland, Oregon	"	Road oil.
Portland, Oregon	"	Road oil.
Richmond, Calif.	RR "	Road oil.
Richmond, Calif.	RR "	Road oil.
Melrose, Calif.	RR "	Autos.
May, 1927:		
St. Johns, Oregon	O.-W. R. & N.	Barrels.
San Francisco, Calif.	SS "	Sugar.
Melrose, Calif.	RR "	Autos.
Blaine, Washington	"	Shooks.
Everett, Washington	"	Poles.
Portland, Oregon	"	Gasoline.
Sacramento, Calif.	RR "	Green veg.
Portland, Oregon	"	Feed.
Tacoma, Washington	"	Ars. lead.
Emeryville, Calif.	RR "	Bake ovens.
Sacramento, Calif.	RR "	Green veg.
San Francisco, Calif.	SS "	Sugar.
Melrose, Calif.	RR "	Autos.
2424 June, 1927:		
E. Portland	O.-W. R. & N.	Poultry food.
Melrose, Calif.	RR O.-W. R. & N.	Autos.
St. John, Oregon	"	Bbls.
Aberdeen, Washington	"	Shingles.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR "	Autos.

Received at Payette, Idaho—Continued

Origin	Routing	Commodity
July, 1927:		
Melrose, Calif.	RR O.-W. R. & N.	Autos.
Portland, Oregon	"	Road oil.
Melrose, Calif.	RR "	Autos.
Linnton, Oregon	"	Lumber.
Melrose, Calif.	RR "	Autos.
San Francisco, Calif.	RR "	Baskets.
Albina, Oregon	"	Paper.
August, 1927:		
Thenard, Calif.	RR O.-W. R. & N.	Gasoline.
Richmond, Calif.	RR "	Fuel oil.
Melrose, Calif.	RR "	Autos.
Richmond, Calif.	RR "	Fuel oil.
St. Johns, Oregon	"	Bbls.
Puyallup, Washington	"	Shooks.
Richmond, Calif.	RR "	Fuel oil.
Seattle, Washington	"	Shooks.
St. Johns, Oregon	"	Bbls.
Glendale, Calif.	RR "	Baskets.
Richmond, Calif.	RR "	Fuel oil.
Richmond, Calif.	RR "	Fuel oil.
Everett, Washington	"	Poles.
September, 1927:		
Albina, Oregon	O.-W. R. & N.	Paper.
Melrose, Calif.	RR "	Autos.
Thenard, Calif.	Ogden	Gasoline.
Raymond, Washington	O.-W. R. & N.	Shooks.
Seattle, Washington	"	Bbls.
Richmond, Calif.	RR "	Fuel oil.
Richmond, Calif.	RR "	Fuel oil.
Melrose, Calif.	RR "	Autos.
Richmond, Calif.	RR "	Fuel oil.
Richmond, Calif.	RR "	Fuel oil.
Melrose, Calif.	RR "	Autos.
2425 October, 1927:		
Melrose, Calif.	RR O.-W. R. & N.	Autos.
Seattle, Washington	"	Gasoline.
Seattle, Washington	"	Bbls.
Seattle, Washington	"	Gasoline.
Seattle, Washington	"	Bbls.
Melrose, Calif.	RR "	Autos.
Melrose, Calif.	RR "	Autos.
Seattle, Washington	"	Bbls.
Melrose, Calif.	RR "	Autos.
November, 1927:		
Brewster, Oregon	O.-W. R. & N.	Lumber.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR "	Autos.
Melrose, Calif.	RR "	Autos.
Melrose, Calif.	RR "	Autos.
San Francisco, Calif.	SS "	Acid.

2426 *Received at Wilder, Idaho*

Origin	Routing	Commodity
March, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
April, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
Portland, Oregon	"	Gasoline.
May, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
July, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
October, 1927:		
Seattle, Washington	O.-W. R. & N.	Gasoline.
November, 1927:		
Seattle, Washington	O.-W. R. & N.	Shingles.

Received at Cabarton, Idaho

Origin	Routing	Commodity
April, 1927:		
Portland, Oregon	O.-W. R. & N.	Canned fruit & veg.
May, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
July, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
October, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
November, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.

2427 *Received at Caldwell, Idaho*

Origin	Routing	Commodity
January, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
Melrose, Calif.	RR "	Autos.
Oakland, Calif.	RR "	Soap.
Portland, Oregon	"	Lubr. oil.
Spokane, Washington	"	Poultry feed.
Spokane, Washington	"	Poultry feed.
Portland, Oregon	"	Autos.
Portland, Oregon	"	Autos.
Athena, Oregon	"	Barley.
Portland, Oregon	"	Poultry feed.
Tacoma, Washington	"	Poultry feed.
Portland, Oregon	"	Gasoline.
Albina, Oregon	"	Poultry feed.
Spokane, Washington	"	Poultry feed.
February, 1927:		
Linnton, Oregon	O.-W. R. & N.	Fir lumber.
Priest River, Idaho	"	Cedar poles.
Portland, Oregon	"	Autos.
San Francisco, Calif.	SS "	Sugar.
Puyallup, Washington	"	Box shooks.
Portland, Oregon	"	Autos.
Puyallup, Washington	"	Box shooks.
Albina, Oregon	"	Fir lumber.
Albina, Oregon	"	Oats.
Melrose, Calif.	RR "	Autos.
Portland, Oregon	"	Fir lumber.
Portland, Oregon	"	Autos.
Athena, Washington	"	Barley.
Athena, Washington	"	Barley.
Spokane, Washington	"	Poultry feed.
Portland, Oregon	"	Gasoline.
Seattle, Washington	"	Fir lumber.
March, 1927:		
Melrose, Calif.	RR O.-W. R. & N.	Autos.
Melrose, Calif.	RR "	Autos.
Seattle, Washington	"	Fir lumber.
Melrose, Calif.	RR "	Autos.
Elmhurst, Calif.	RR "	Autos.
East Portland, Ore.	"	Autos.
Melrose, Calif.	RR "	Autos.
Portland, Oregon	"	Gasoline.
Seattle, Washington	"	Cedar shingles.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR "	Autos.
Melrose, Calif.	RR "	Autos.
San Francisco, Calif.	SS "	Sugar.
Portland, Oregon	"	Gasoline.
Tacoma, Wash.	"	Poultry feed.
Everett, Wash.	"	Cedar shingles.
Melrose, Calif.	RR "	Autos.
Elmhurst, Calif.	RR "	Autos.
Portland, Oregon	"	Gasoline.
2428 Melrose, Calif.	RR O.-W. R. & N.	Autos.
Portland, Oregon	"	Flour.
Oakland, Calif.	RR "	Roofing.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR "	Autos.
April, 1927:		
Everett, Washington	O.-W. R. & N.	Cedar shingles.
Portland, Oregon	"	Gasoline.
Antioch, Calif.	RR "	Egg fillers.

Received at Caldwell, Idaho—Continued

Origin	Routing	Commodity
April, 1927—Continued.		
Albina, Oregon	O.-W. R. & N.	Poultry feed.
Portland, Oregon	"	Poultry feed.
Portland, Oregon	"	Gasoline.
Portland, Oregon	"	Gasoline.
Portland, Oregon	"	Poultry feed.
E. Portland, Oregon	"	Autos.
Tacoma, Washington	"	P. feed.
Bellingham, Washington	"	Fir lumber.
San Francisco, Calif.	SS "	Sugar.
Melrose, California	RR "	Autos.
Melrose, California	RR "	Autos.
Melrose, California	RR "	Autos.
Portland, Oregon	"	Gasoline.
San Francisco, Calif.	SS "	Sugar.
E. Portland, Oregon	"	Autos.
Elmhurst, Calif.	RR "	Autos.
San Francisco, Calif.	SS "	Sugar.
Melrose, California	RR "	Autos.
Melrose, California	RR "	Autos.
Melrose, California	RR "	Autos.
May, 1927:		
Albina, Oregon	O.-W. R. & N.	Steel.
Melrose, California	RR "	Autos.
Puyallup, Washington	"	Fir lumber.
Melrose, California	RR "	Autos.
E. Portland, Oregon	"	Fir lumber.
Albina, Oregon	"	Steel.
Portland, Oregon	"	Oil.
Melrose, California	RR "	Autos.
Portland, Oregon	"	Twine.
San Francisco, Calif.	SS "	Sugar.
San Francisco, Calif.	SS "	Sugar.
Albina, Oregon	"	Fir lumber.
Melrose, Calif.	RR "	Autos.
Albina, Oregon	"	P. food.
Portland, Oregon	"	Oil.
Albina, Oregon	"	Fir lumber.
Melrose, Calif.	RR "	Autos.
Seattle, Washington	"	Fir lumber.
East Portland, Oregon	"	P. food.
San Francisco, Calif.	SS "	Sugar.
2429 June, 1927:		
Linnton, Oregon	O.-W. R. & N.	Fir lumber.
Melrose, Calif.	RR "	Autos.
Antioch, Calif.	RR "	Egg fillers.
Melrose, Calif.	RR "	Autos.
Portland, Oregon	"	Cedar shingles.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR "	Autos.
San Francisco, Calif.	SS "	Sugar.
Albina, Oregon	"	P. food.
Melrose, Calif.	RR "	Autos.
Melrose, Calif.	RR "	Autos.
Portland, Oregon	"	Gasoline.
Portland, Oregon	"	Autos.
Portland, Oregon	"	Gasoline.
Portland, Oregon	"	P. food.
July, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
Melrose, Calif.	RR "	Autos.
San Francisco, Calif.	SS "	Bags.
Melrose, Calif.	RP "	Autos.
San Francisco, Calif.	SS "	Sugar.
San Francisco, Calif.	SS "	Bags.
San Francisco, Calif.	RR "	Gasoline.
August, 1927:		
San Francisco, Calif.	SS O.-W. R. & N.	Burlap bags.
Melrose, Calif.	RR "	Autos.
San Francisco, Calif.	SS "	Sugar.
Willbridge, Oregon	"	Gasoline.
Melrose, Calif.	RR "	Autos.
Willbridge, Oregon	"	Oil & grease.
Melrose, Calif.	RR "	Autos.
San Francisco, Calif.	SS "	Sugar.
San Francisco, Calif.	SS "	Burlap bags.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR "	Autos.
Seattle, Washington	"	Box shooks.
Puyallup, Washington	"	Box shooks.
E. Portland, Oregon	"	Lumber.
Portland, Oregon	"	Oil.
Portland, Oregon	"	Gasoline.

Received at Caldwell, Idaho—Continued

Origin	Routing	Commodity
September, 1927:		
San Francisco, Calif.	SS O.-W. R. & N.	Sugar.
San Francisco, Calif.	SS "	Acid.
Seattle Wharf, Wash.	"	Charcoal.
Melrose, Calif.	RR "	Autos.
Portland, Oregon	"	Gasoline.
Pineville, Oregon	"	Sheep.
Pineville, Oregon	"	Sheep.
Portland, Oregon	"	Marble.
Portland, Oregon	"	Furniture.
Tacoma, Washington	"	Furniture.
Linnton, Oregon	"	Lumber.
2430 Melrose, Calif.	RR O.-W. R. & N.	Autos.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR "	Autos.
San Francisco, Calif.	SS "	Sugar.
E. Portland, Oregon	"	Lumber.
Melrose, Calif.	RR "	Autos.
Portland, Oregon	"	Oil.
Bend, Oregon	RR "	Sheep.
Linnton, Oregon	"	Lumber.
Melrose, Calif.	RR "	Autos.
October, 1927:		
San Francisco, Calif.	SS O.-W. R. & N.	Sugar.
San Francisco, Calif.	SS "	Sugar.
Everett, Washington	"	Poles.
Seattle, Washington	"	Gasoline.
Portland, Oregon	"	Gasoline.
Portland, Oregon	"	Oyster shells.
Melrose, Calif.	RR "	Autos.
Seattle, Washington	"	Gasoline.
Portland, Oregon	"	Feed.
Portland, Oregon	"	Gasoline.
San Francisco, Calif.	SS "	Sugar.
Portland, Oregon	"	Oil.
Portland, Oregon	"	Oil.
Melrose, Calif.	RR "	Autos.
Portland, Oregon	"	Gasoline.
November, 1927:		
Melrose, Calif.	RR O.-W. R. & N.	Autos.
Seattle, Washington	"	Gasoline.
Seattle, Washington	"	Wood Pipe.
Albina, Oregon	"	Furniture.
Seattle, Washington	"	Molasses.
Melrose, Calif.	RR "	Autos.
Melrose, Calif.	RR "	Autos.
Linnton, Oregon	"	Lumber.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR "	Autos.
Portland, Oregon	"	Ref. oil.
Longview, Washington	"	Lumber.
Portland, Oregon	"	Lubr. oil.
Raymond, Washington	"	Box shooks.
Albina, Oregon	"	Feed.
Portland, Oregon	"	Gasoline.
December, 1927:		
Raymond, Washington	O.-W. R. & N.	Box shooks.
Portland, Oregon	"	Stk. feed.
Portland, Oregon	"	Gasoline.
San Francisco, Calif.	RR "	Bags.
San Francisco, Calif.	SS "	Sugar.
E. Portland, Oregon	"	Potatoes.
Seattle, Washington	"	Feed.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR "	Autos.
Melrose, Calif.	RR "	Autos.

2431 *Received at Homedale, Idaho*

Origin	Routing	Commodity
January, 1927:		
E. Portland, Oregon	O.-W. R. & N.	Lumber.
February, 1927:		
Linnton, Oregon	O.-W. R. & N.	Lumber.
July, 1927:		
Linnton, Oreg	O.-W. R. & N.	Lumber.
October, 1927:		
Portland, Oregon	O.-W. R. & N.	Fuel oil.
November, 1927:		
Seattle, Washington	O.-W. R. & N.	Lumber.
December, 1927:		
Clatskanie, Oregon	SS O.-W. R. & N.	Shingles.
Linnston, Oregon	"	Lumber.

Received at Melba, Idaho

Origin	Routing	Commodity
February, 1927:		
Samuels, Idaho	O.-W. R. & N.	Posts.
Seattle, Washington	"	Shingles.
Portland, Oregon	"	Lumber.
August, 1927:		
Seattle, Washington	O.-W. R. & N.	Lumber.
October, 1927:		
Seattle, Washington	O.-W. R. & N.	Lumber.

Received at Murphy, Idaho

Origin	Routing	Commodity
September, 1927:		
Marysville, Calif.	Ogden	Machinery.
October, 1927:		
Marysville, Calif.	Ogden	Machinery.

2432 *Received at Fruitland, Idaho*

Origin	Routing	Commodity
March, 1927:		
Oakland, Calif.	SS O.-W. R. & N.	Ars. lead.
April, 1927:		
San Francisco, Calif.	SS O.-W. R. & N.	Liquid spray.
June, 1927:		
Portland, Oregon	O.-W. R. & N.	Steel bars.
August, 1927:		
Puyallup, Washington	O.-W. R. & N.	Shooks.
September, 1927:		
Aberdeen, Washington	O.-W. R. & N.	Shingles.
October, 1927:		
E. Portland, Oregon	O.-W. R. & N.	Lumber.

Received at McCall, Idaho

Origin	Routing	Commodity
April, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
May, 1927:		
Willbridge, Oregon	O.-W. R. & N.	Gasoline.
June, 1927:		
Willbridge, Oregon	O.-W. R. & N.	Gasoline.
July, 1927:		
Willbridge, Oregon	O.-W. R. & N.	Gasoline.
August, 1927:		
Willbridge, Oregon	O.-W. R. & N.	Gasoline.
September, 1927:		
Willbridge, Oregon	O.-W. R. & N.	Gasoline.
October, 1927:		
Willbridge, Oregon (2)	O.-W. R. & N.	Gasoline.

2433 *Received at Emmett, Idaho*

Origin	Routing	Commodity
January, 1927:		
San Francisco, Calif.	SS O.-W. R. & N.	Sugar.
Sandpoint, Idaho	"	Posts.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR "	Autos.
February, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
Everett, Washington	"	Shingles.
Portland, Oregon	"	Oyster shells.
March, 1927:		
Albina, Oregon	O.-W. R. & N.	Oyster shells.
Elmhurst, Calif.	RR "	Autos.
San Francisco, Calif.	SS "	Lead.
San Francisco, Calif.	SS "	Sugar.
Portland, Oregon	"	Gasoline.
N. Portland, Oregon	"	Fertilizer.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR "	Autos.
Portland, Oregon	"	Autos.
Portland, Oregon	"	Gasoline.
April, 1927:		
San Francisco, Calif.	SS O.-W. R. & N.	Sugar.
San Francisco, Calif.	RR "	Sugar.
Nevada Dock, Calif.	RR "	Oil.
Portland, Oregon	"	Gasoline.
San Francisco, Calif.	SS "	Sugar.
Portland, Oregon	"	F. oil.
Avan, Calif.	Ogden	F. oil.
May, 1927:		
San Francisco, Calif.	SS O.-W. R. & N.	Sugar.
Portland, Oregon	"	Gasoline.
Albina, Oregon	"	Twine.
Pentland, Calif.	"	Gasoline.
June, 1927:		
Linnton, Oregon	O.-W. R. & N.	Lumber.
San Francisco, Calif.	SS "	Sugar.
Portland, Oregon	"	Gasoline.
July, 1927:		
San Francisco, Calif.	SS O.-W. R. & N.	Sugar.
Portland, Oregon	"	Gasoline.
Portland, Oregon	"	Gasoline.
2434 August, 1927:		
San Francisco, Calif.	SS O.-W. R. & N.	Sugar.
Portland, Oregon	"	Gasoline.
San Francisco, Calif.	SS "	Sugar.
Puyallup, Wash.	"	Shooks.
September, 1927:		
E. Portland, Oregon	O.-W. R. & N.	Const. equip.
Seattle, Washington	"	Shingles.
Portland, Oregon	"	Gasoline.
San Francisco, Calif.	SS "	Sugar.
Portland, Oregon	"	Gasoline.
San Francisco, Calif.	SS "	Sugar.
Aberdeen, Washington	"	Shingles.
October, 1927:		
Seattle, Washington	O.-W. R. & N.	Lumber.
San Francisco, Calif.	SS "	Sugar.
Seattle, Washington	"	Gasoline.
Portland, Oregon	"	Gasoline.
Seattle, Washington	"	Lumber.
November, 1927:		
Seattle, Washington	O.-W. R. & N.	Gasoline.
Portland, Oregon	"	Gasoline.
Chehalis, Washington	"	Lumber & bldg. mat.
Seattle, Washington	"	Shingles.
December, 1927:		
San Francisco, Calif.	SS O.-W. R. & N.	Sugar.
Portland, Oregon	"	Gasoline.

2435 *Received at Parma, Idaho*

Origin	Routing	Commodity
May, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
Colima, Calif.	Ogden	Fruit hampers.
June, 1927:		
Linnton, Oregon	O.-W. R. & N.	Lumber.
Colima, Calif.	Ogden	Fruit hampers.
July, 1927:		
No. Puyallup, Wash.	O.-W. R. & N.	Baskets.
Portland, Oregon	"	Cans.
Linnton, Oregon	"	Lumber.
August, 1927, September, 1927:		
Portland, Oregon	O.-W. R. & N.	Lumber.
October, 1927:		
Bend, Oregon (6)	O.-W. R. & N.	Sheep.
November, 1927:		
Seattle, Wash.	O.-W. R. & N.	Gasoline.
December, 1927:		
Linnton, Oregon	O.-W. R. & N.	Lumber.

2436 *Received at Kuna, Idaho*

Origin	Routing	Commodity
September, 1927:		
Seattle, Washington	O.-W. R. & N.	Lumber.
Seattle, Washington	"	Lumber.
October, 1927:		
Seattle, Washington	O.-W. R. & N.	Fir lumber.

Received at Middleton, Idaho

Origin	Routing	Commodity
July, 1927:		
Portland, Oregon	O.-W. R. & N.	Tin cans.
October, 1927:		
Everett, Washington	O.-W. R. & N.	Shingles.

2437 *Received at Mountain Home, Idaho*

Origin	Routing	Commodity
March, 1927:		
E. Portland, Oregon	O.-W. R. & N.	Autos.
E. Portland, Oregon	"	Lumber.
Portland, Oregon	"	Gasoline.
Portland, Oregon	"	Gasoline.
Portland, Oregon	"	Gasoline.
April, 1927:		
Melrose, Calif.	RR O.-W. R. & N.	Autos.
Portland, Oregon	"	Gasoline.
Portland, Oregon	"	Gasoline.
May, 1927:		
Portland, Oregon (2)	O.-W. R. & N.	Gasoline.
Ione, Washington	"	Cedar Posts.
Portland, Oregon	"	Gasoline.
June, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
Melrose, Calif.	RR "	Autos.
Portland, Oregon	"	Gasoline.
July, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
Portland, Oregon (2)	"	Gasoline.
Portland, Oregon	"	Gasoline.
Linnton, Oregon	"	Lumber.
August, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
Portland, Oregon	"	Gasoline.

Received at Mountain Home, Idaho—Continued

Origin	Routing	Commodity
September, 1927:		
Portland, Oregon (2)	O.-W. R. & N.	Gasoline.
Portland, Oregon	"	Oil-meal cake.
Portland, Oregon	"	Gasoline.
October, 1927:		
Sunnyside, Calif.	Wells	M. machinery.
E. Portland, Oregon	O.-W. R. & N.	Fir lumber.
Portland, Oregon (2)	"	Gasoline.
Portland, Oregon	"	Gasoline.
November, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.
Portland, Oregon	"	Gasoline.
December, 1927:		
Portland, Oregon	O.-W. R. & N.	Gasoline.

2438 *Received at Nampa, Idaho*

Origin	Routing	Commodity
January, 1927:		
Kelso, Washington	O.-W. R. & N.	Shingles.
Wenlock, Washington	"	Lumber.
Wenlock, Washington	"	Lumber.
St. Clair, Washington	"	Ties.
Galvin, Washington	"	Lumber.
Tenino, Washington	"	Lumber.
Gresham, Washington	"	Lumber.
Wenlock, Washington	"	Lumber.
The Dalles, Oregon (3)	"	Ties.
Olympia, Washington	"	Shingles.
Linnton, Oregon	"	Lumber.
Melrose, Calif.	RR "	Autos.
San Francisco, Calif.	SS "	Sugar.
Portland, Oregon	"	Gasoline.
Seattle, Washington	"	Lumber.
Wenlock, Washington	"	Lumber.
Seattle, Washington	"	Machinery.
Albina, Oregon	"	Underframes.
Linnton, Oregon (2)	"	Lumber.
February, 1927:		
Independence, Washington	O.-W. R. & N.	Lumber.
Nisqually, Washington	"	Ties.
Hoquiam, Washington	"	Case lining.
St. Clair, Washington	"	Ties.
Galvin, Washington (2)	"	Lumber.
Olympia, Washington	"	Lumber.
Wenlock, Washington	"	Lumber.
Aberdeen, Washington (2)	"	Lumber.
The Dalles, Oregon (11)	"	Ties.
Galvin, Washington	"	Lumber.
Wenlock, Washington	"	Lumber.
N. Portland, Oregon	"	Shingles.
Portland, Oregon	"	Gasoline.
E. Portland, Oregon	"	Oyster shells.
Melrose, Calif.	RR "	Autos.
Albina, Oregon	"	Underframes.
Ruby, Washington	"	Posts.
E. Portland, Oregon	"	Autos.
E. Portland, Oregon	"	Agri. implements.
Seattle, Washington	"	Spikes.
Portland, Oregon	"	Lumber.
Independence, Washington	"	Lumber.
Gresham, Oregon (2)	"	Lumber.
Galvin, Washington (2)	"	Lumber.
Wenlock, Washington (2)	"	Lumber.
St. Clair, Washington	"	Ties.
E. Portland, Oregon	"	Lumber.
The Dalles, Oregon (29)	"	Ties.
Galvin, Washington (2)	"	Lumber.
Portland, Oregon	"	Lumber.
San Francisco, Calif.	SS "	Sugar.
Albina, Oregon	"	Underframes.
Melrose, Calif.	RR "	Autos.
Parafina, Calif.	RR "	Roofing.
Kalama, Washington	"	Shingles.
E. Portland, Oregon	"	Autos.
Portland, Oregon	"	Feed.

Received at Nampa, Idaho—Continued

Origin	Routing	Commodity
2439 E. Portland, Oregon (2)	O.-W. R. & N.	Cows & calves.
Portland, Oregon	"	Kainomine.
Portland, Oregon	"	Gasoline.
N. Portland, Oregon	"	Shingles.
E. Portland, Oregon	"	Lumber.
March, 1927:		
Melrose, Calif.	RR O.-W. R. & N.	Autos.
Melrose, Calif.	RR "	Autos.
Portland, Oregon	"	Canned goods.
Melrose, Calif.	RR "	Autos.
Portland, Oregon	"	Chick food.
San Francisco, Calif.	SS "	Sugar.
Melrose, Calif.	RR "	Autos.
Portland, Oregon	"	Fuel oil.
Albina, Oregon	"	Underframes.
Gresham, Oregon	"	Lumber.
Olympia, Washington	"	Lumber.
St. Johns, Oregon	"	Lumber.
Hoquiam, Washington	"	Lumber.
St. Johns, Oregon	"	Lumber.
Wenlock, Washington	"	Lumber.
Wenlock, Washington	"	Piling.
Galvin, Washington	"	Lumber.
Hoquiam, Washington	"	Lumber.
St. Johns, Oregon	"	Lumber.
Wenlock, Washington	"	Piling.
Wenlock, Washington	"	Lumber.
Gusham, Oregon	"	Lumber.
Centralia, Washington (2)	"	Piling.
Vader, Washington (5)	"	Piling.
Melrose, Calif.	RR "	Autos.
E. Portland, Oregon	"	Autos.
Oakland, Calif.	SS "	Arsenate of lead.
Portland, Oregon	"	Gasoline.
Portland, Oregon	"	Cereal bev.
Oakland, Calif.	SS "	Soap.
Albina, Oregon	"	Underframes.
Vancouver, Washington (2)	"	Lumber.
Linnton, Oregon	"	Lumber.
Portland, Oregon	"	Gasoline.
E. Portland, Oregon	"	Autos.
E. Portland, Oregon	"	Paper cans.
Oakland, Calif.	SS "	Roofing.
April, 1927:		
San Francisco, Calif.	SS O.-W. R. & N.	Sugar.
Melrose, Calif.	RR "	Autos.
Melrose, Calif.	RR "	Autos.
Everett, Washington	"	Lumber.
Portland, Oregon	"	Gasoline.
Portland, Oregon	"	Canned goods.
San Francisco, Calif.	SS "	Sugar.
E. Portland, Oregon	"	Autos.
Melrose, Calif.	RR "	Autos.
San Francisco, Calif.	SS "	Sugar.
Pittsburg, Calif.	RR "	Castings.
2440 San Francisco	RR O.-W. R. & N.	Bottles.
San Francisco, Calif.	RR "	Flav. syrup.
Seattle, Washington (3)	"	Spikes.
Ore.-Wash. (14)	"	Lumber.
Ore.-Wash. (4)	"	Piling.
Ore.-Wash. (3)	"	Posts.
Albina, Oregon	"	Underframes.
Portland, Oregon	"	Gasoline.
Albina, Oregon	"	Underframes.
Albina, Oregon	"	Underframes.
Melrose, Calif.	RR "	Autos.
Ore.-Wash. (3)	"	Lumber.
Ore.-Wash. (8)	"	Lumber.
Seattle, Washington (4)	"	Oil.
May, 1927:		
San Francisco, Calif.	SS O.-W. R. & N.	Sugar.
Melrose, Calif.	RR "	Autos.
San Francisco, Calif.	SS "	Sugar.
San Francisco, Calif.	SS "	Sugar.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR "	Autos.
Albina, Oregon	"	Underframes.
Portland, Oregon	"	Gasoline.
Winlock, Washington	"	Lumber.
Ore.-Wash. (11)	"	Lumber, ties, piling.
St. Helens (2)	"	Creosote & oil.
Ore.-Wash (15)	"	Lumber, ties, piling.

Received at Nampa, Idaho—Continued

Origin	Routing	Commodity
May, 1927—Continued.		
E. Portland, Oregon	O.-W. R. & N.	Autos.
Albina, Oregon	"	Underframes.
Melrose, Calif.	RR	Autos.
Portland, Oregon	"	Feed.
Melrose, Calif.	RR	Autos.
Portland, Oregon (2)	"	Gasoline.
Portland, Oregon	"	Twine.
Albina, Oregon (2)	"	Underframes.
June, 1927:		
Melrose, Calif.	RR O.-W. R. & N.	Autos.
Ore.-Wash. (8)	"	Lumber posts.
Ore.-Wash. (3)	"	Lumber posts.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR	Autos.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR	Autos.
Melrose, Calif.	RR	Autos.
Portland, Oregon	"	Canned goods.
San Francisco, Calif.	SS	Oil.
Ore.-Wash. (17)	"	Lumber, etc.
Seattle, Washington (2)	"	Spikes.
St. Helens, Oregon (4)	"	Oil.
Ore.-Wash. (15)	"	Lumber, etc.
Portland, Oregon	"	Beverages.
Pittsburg, Calif.	RR	Castings.
Melrose, Calif.	RR	Autos.
Melrose, Calif.	RR	Autos.
Portland, Oregon	"	Gasoline.
2441 San Francisco, Calif.	SS O.-W. R. & N.	Lubr. Oil.
Portland, Oregon	"	Gasoline.
Melrose, Calif.	RR	Autos
Portland, Oregon	"	Binder twine.
San Francisco, Calif.	SS	Sugar.
Portland, Oregon	"	Gasoline.
Portland, Oregon	"	Canned goods.
July, 1927:		
Los Angeles, Calif.	RR O.-W. R. & N.	Ir. Pan.
Melrose, Calif.	RR	Autos.
Melrose, Calif.	RR	Autos.
San Francisco, Calif.	SS	Sugar.
Melrose, Calif.	RR	Autos.
Portland, Oregon	"	Gasoline.
San Francisco, Calif.	SS	Sugar.
San Francisco, Calif.	SS	Sugar.
Melrose, Calif.	RR	Autos.
Portland, Oregon	"	Gasoline.
Portland, Oregon	"	Meal.
Portland, Oregon	"	Gasoline.
Ore.-Wash. (4)	"	Lumber.
St. Helens, Oregon (2)	"	Oil.
Ore.-Wash. (23)	"	Lumber, piling, etc.
Ore.-Wash. (12)	"	Lumber, piling, etc.
Portland, Oregon	"	Beverages.
Ore.-Wash. (22)	"	Lumber, piling, etc.
St. Helens, Oregon (2)	"	Creosote oil.
Portland, Oregon	"	Syrup.
Portland, Oregon	"	Bake ovens.
Melrose, Calif.	RR	Autos.
Portland, Oregon	"	Canned goods.
San Francisco, Calif.	SS	Sugar.
Oakland, Calif.	SS	Soap.
Portland, Oregon	"	Oyster shells.
August, 1927:		
Linnton, Oregon	O.-W. R. & N.	Lumber.
Swaner, Washington	"	Lumber.
Renton, Washington	"	Underframes.
San Francisco, Calif.	SS	Bags.
Kelso, Washington	"	Shingles.
Portland, Oregon	"	Gasoline.
San Francisco, Calif.	SS	Sugar.
San Francisco, Calif.	SS	Oil & grease.
San Francisco, Calif.	SS	Sugar.
Portland, Oregon	"	Gasoline.
Albina, Oregon	SS	Cereals.
San Francisco, Calif.	SS	Sugar.
San Francisco, Calif.	SS	Sugar.
E. Portland, Oregon	"	Lumber.
Melrose, Calif.	RR	Autos.
Puyallup, Washington	"	Shooks.
Ore.-Wash. (5)	"	Lumber & piling.
Seattle, Washington (2)	"	Creosote.

Received at Nampa, Idaho—Continued

Origin	Routing		Commodity
2442 Ore.-Wash. (5)	O.-W.	R. & N.	Lumber & piling.
Tacoma, Washington (5)	"	"	Doors.
Ore.-Wash. (16)	"	"	Lumber & piling.
Tacoma, Washington	"	"	Doors.
Ore.-Wash. (12)	"	"	Lumber & piling.
Kelso, Washington	"	"	Shingles.
Tacoma, Washington	"	"	Doors.
Ore.-Wash. (25)	"	"	Lumber & piling.
Seattle, Washington (2)	"	"	Oil.
Ore.-Wash. (26)	"	"	Lumber & piling.
Oakland, Calif.	RR	"	Baskets.
San Francisco, Calif.	SS	"	Sugar.
Melrose, Calif.	RR	"	Autos.
Melrose, Calif.	RR	"	Autos.
Melrose, Calif.	RR	"	Autos.
Linnton, Oregon		"	Lumber.
Bellingham, Washington		"	Shingles.
Renton, Washington		"	Car frames.
Melrose, Calif.	RR	"	Autos.
Pittsburg, Calif.	RR	"	Iron castings.
Portland, Oregon		"	Gasoline.
Renton, Washington		"	Underframes.
Renton, Washington		"	Underframes.
Portland, Oregon		"	Lumber.
Portland, Oregon		"	Gasoline.
October, 1927:			
Melrose, Calif.	RR	O.-W. R. & N.	Autos.
Seattle, Washington		"	Gasoline.
Portland, Oregon		"	Canned goods.
Portland, Oregon		"	Meal.
Renton, Washington (3)		"	Underframes.
Melrose, Calif.	RR	"	Autos.
Oakland, Calif.	SS	"	Soap.
Seattle, Washington		"	Lumber.
Tacoma, Washington		"	Lumber.
Oregon City, Oregon		"	Paper.
Seattle, Washington		"	Steel.
Portland, Oregon		"	Gasoline.
San Francisco, Calif.	SS	"	Sugar.
Melrose, Calif.	RR	"	Autos.
Seattle, Washington		"	Gasoline.
Aberdeen, Washington		"	Lumber.
Seattle, Washington		"	Gasoline.
San Francisco, Calif.	SS	"	Sugar.
San Francisco, Calif.	SS	"	Sugar.
Portland, Oregon		"	Lumber.
Portland, Oregon		"	Gasoline.
Vancouver, Washington		"	Lumber.
Portland, Oregon		"	Nuts.
E. Portland, Oregon		"	Furniture.
Seattle, Washington		"	Gasoline.
Puyallup, Washington		"	Box shooks.
Portland, Oregon		"	Gasoline.
Linnton, Oregon		"	Lumber.
Tacoma, Washington		"	Lumber.
Bellingham, Washington		"	Lumber.
2443 Everett, Washington	O.-W.	R. & N.	Shingles.
Portland, Oregon	"	"	Lumber.
Centralia, Washington	"	"	Lumber.
Eugene, Oregon	"	"	Lumber.
November, 1927:			
San Francisco, Calif.	SS	O.-W. R. & N.	Canned goods.
Portland, Oregon		"	Canned goods.
Portland, Oregon		"	Molasses.
Kelso, Washington		"	Lumber.
Albina, Oregon		"	Cereals.
Seattle, Washington		"	Gasoline.
Seattle, Washington		"	Lumber.
Portland, Oregon		"	Molasses.
Seattle, Washington		"	Gasoline.
San Francisco, Calif.	SS	"	Sugar.
Seattle, Washington		"	Gasoline.
San Francisco, Calif.	RR	"	Castings.
Portland, Oregon		"	Stk. feed.
Kelso, Washington		"	Lumber.
Portland, Oregon		"	Gasoline.
Seattle, Washington		"	Gasoline.
Melrose, Calif.	RR	"	Autos.
Olympia, Washington		"	Lumber.
Portland, Oregon		"	Gasoline.
Kelso, Washington		"	Lumber.

Received at Nampa, Idaho—Continued

Origin	Routing	Commodity
December, 1927:		
Aberdeen, Washington	O.-W. R. & N.	Lumber.
Kelso, Washington	"	Lumber.
Portland, Oregon	"	Gasoline.
Seattle, Washington	"	Gasoline.
Fruitvale, Calif	SS "	Paint comp.
San Francisco, Calif	SS "	Sugar.
Seattle, Washington	"	Gasoline.
Portland, Oregon	"	Beverages.
Seattle, Washington	"	Lumber.
Albina, Oregon	"	Shingles.
Melrose, Calif	RR "	Autos.
Melrose, Calif	RR "	Autos.
Portland, Oregon	"	Meal.
Portland, Oregon	"	Gasoline.
San Francisco, Calif	SS "	Sugar.
Seattle, Washington	"	Gasoline.
Seattle, Washington	"	Gasoline.
Portland, Oregon	"	Gasoline.

2444

Exhibit No. 8—Witness Newton

I. C. C. docket No. 19680

Before the Interstate Commerce Commission

I. C. C. docket No. 19680

PUBLIC SERVICE COMMISSION OF OREGON

vs.

CENTRAL PACIFIC RAILWAY COMPANY ET AL.

Exhibit showing receipt of various commodities at stations in Oregon on the Oregon Short Line Railroad for points of origin as shown

2445 [O. S. L. R. R. Form 1694]

Origin	Routing	Commodity
Carloads received at Nyssa, Oregon, from California points that might have routed via proposed railroad across Oregon:		
April, 1927—		
Willabridge, Ore	O.-W. R. & N.	Grease and oil.
Willabridge, Ore	"	Gaso.
" "	"	"
" "	"	"
" "	"	"
Assembly, Ore	"	Lumber.
Portland, Ore	"	Autos.
August, 1927—		
Portland, Ore	O.-W. R. & N.	Gaso.
" "	"	"
" "	"	"
" "	"	"
Tacoma, Wash	"	Cedar cross arms.
September, 1927—		
Portland, Ore	O.-W. R. & N.	Gaso.
" "	"	Oil.
" "	"	Gaso.
October, 1927—		
Portland, Ore	O.-W. R. & N.	Oil.
Melrose, Calif	RR "	Autos.
Seattle, Wash	"	Gaso.
Portland, Ore	"	"
" "	"	Oil.
" "	"	Distillate.
" "	"	Gaso.
Seattle, Wash	"	"

Exhibit showing receipt of various commodities at stations in Oregon on the Oregon Short Line Railroad for points of origin as shown—Continued

Origin	Routing	Commodity
Carloads received at Nyssa, Oregon, etc.—Con.		
November, 1927—		
Portland, Ore	O.-W. R. & N	Gaso.
December, 1927—		
Portland, Ore	O.-W. R. & N	Gaso.
" "	"	Gaso.
" "	"	Lumber.
" "	"	Gaso.
Jacobson, Wash	"	Construction machinery.
Carloads received at Juntura, Oregon:		
January, 1927—		
San Francisco, Calif		Salt.
July, 1927—		
San Francisco, Calif		Salt.
Carloads received at Brogan, Oregon:		
April, 1927—		
Portland, Ore	O.-W. R. & N	Fuel oil.
March, 1927—		
Nitro, Calif	RR O.-W. R. & N	Black powder.
Portland, Ore	"	Fuel oil.
2446 Carloads received at Burns, Oregon:		
January, 1927—		
Portland, Ore	O.-W. R. & N	Gaso.
" "	"	Fuel oil.
" "	"	" "
" "	"	Gaso.
Melrose, Calif	"	Fuel oil.
Portland, Ore	RR "	Autos.
February, 1927—	"	Gaso.
E. Portland, Ore	O.-W. R. & N	Autos.
" "	"	Gaso.
" "	"	Fuel oil.
March, 1927—	"	Fuel oil.
Portland, Ore	O.-W. R. & N	Fuel oil.
" "	"	Gaso.
E. Portland, Ore	"	Oil.
Portland, Ore	"	Autos.
Linnton, Ore	"	Gaso.
Melrose, Calif	"	Fir lumber.
April, 1927—	RR "	Autos.
Portland, Ore	O.-W. R. & N	Gaso.
" "	"	Oil.
" "	"	Gaso.
" "	"	"
Linnton, Ore	"	Fuel oil.
May, 1927—	"	Lumber.
Portland, Ore	O.-W. R. & N	Fuel oil.
Portland, Ore	"	" "
Linnton, Ore	"	Gaso.
San Francisco, Calif	"	Lumber.
Portland, Ore	SS O.-W. R. & N	Sugar.
"	"	Gaso.
Portland, Ore	"	"
Melrose, Calif	"	Autos.
Portland, Ore	RR "	Autos.
E. Portland, Ore	"	Gaso.
June, 1927—	"	Lumber.
Portland, Ore	O.-W. R. & N	Gaso.
Portland, Ore	"	Gaso.
" "	"	Ohio Ceane.
" "	"	Lumber.
" "	"	Gaso.
San Francisco, Calif	"	Gaso.
Portland, Ore	SS "	Sugar.
E. Portland, Ore	"	Gaso.
" "	"	Iron pipe.
" "	"	Gaso.
Corvallis, Ore	"	Fuel oil.
Portland, Ore	RR "	Cattle.
July, 1927—	"	Fuel oil.
Willabridge, Ore	O.-W. R. & N	Fuel oil.
" "	"	Gaso.
" "	"	Fuel oil.

Exhibit showing receipt of various commodities at stations in Oregon on the Oregon Short Line Railroad for points of origin as shown—Continued

Origin	Routing	Commodity
2447 Carloads received from Burns, Oregon:		
August, 1927—		
Willabridge, Ore	O.-W. R. & N.	Gaso.
" "	"	"
" "	"	"
" "	"	"
" "	"	"
" "	"	"
" "	"	"
Willabridge, Ore	"	Fuel oil.
" "	"	"
" "	"	"
Parafine, Calif	RR "	Roofing.
San Francisco, Calif	SS "	Sugar.
E. Portland, Ore	"	Lumber.
Dupont, Wash		Explosives.
September, 1927—		
Willabridge, Ore	O.-W. R. & N.	Fuel oil.
" "	"	"
" "	"	"
Portland, Ore	"	Spikes.
Willabridge, Ore	"	Fuel oil.
" "	"	Gaso.
" "	"	"
" "	"	"
" "	"	"
" "	"	"
" "	"	"
" "	"	"
" "	"	"
Willabridge, Ore	"	Fuel oil.
" "	"	Oil.
Melrose, Calif	RR "	Autos.
October, 1927—		
Willabridge, Ore	O.-W. R. & N.	Fuel oil.
" "	"	"
" "	"	"
" "	"	"
Willabridge, Ore	"	Gaso.
" "	"	"
" "	"	"
" "	"	"
" "	"	"
Willabridge, Ore	"	Pe. oil.
Melrose, Ore	RR "	Autos.
" "	RR "	Autos.
" "	RR "	"
Kalama, Wash	"	Shingles.
November, 1927—		
Willabridge, Ore	O.-W. R. & N.	Gaso.
" "	"	"
" "	"	"
" "	"	"
" "	"	"
Willabridge, Ore	"	Lub. oil.
Seguro, Calif	Ogden	Fuel oil.
San Francisco, Calif	SS O.-W. R. & N	Sugar.
East Portland, Ore	"	Canned goods.
December, 1927—		
Emenyville, Calif	RR O.-W. R. & N.	Bakers' ovens.
Willabridge, Ore	"	Gasoline.
" "	"	"
" "	"	"
2448 Carloads received at Robinette, Oregon:		
January, 1927—		
Portland, Ore	O.-W. R. & N.	Oil.
Portland, Ore	"	Gaso.
" "	"	Machinery.
February, 1927—		
Portland, Ore	O.-W. R. & N.	Gaso.
" "	"	Fuel oil.
" "	"	Pipe.
East Portland, Ore	"	Wood.
Dishman, Wash	"	Posts.
March, 1927—		
Portland, Ore	O.-W. R. & N.	Gaso.
Portland, Ore	"	Oil.
April, 1927—		
Portland, Ore	O.-W. R. & N.	Gaso.
" "	"	"
Richmond, Wash	"	Oil.
May, 1927—		
Portland, Ore	O.-W. R. & N.	Gaso.

Exhibit showing receipt of various commodities at stations in Oregon on the Oregon Short Line Railroad for points of origin as shown—Continued.

Origin	Routing	Commodity
Carloads received at Robinette, Oregon—Contd.		
June, 1927—		
Oakland, Calif.	SS O.-W. R. & N.	Salt.
Portland, Ore.	"	Gaso.
" "	"	Oils.
E. Portland, Ore.	"	Diesel engines.
July, 1927—		
Portland, Ore.	O.-W. R. & N.	Gaso.
" "	"	"
August, 1927—		
Portland, Ore.	O.-W. R. & N.	Gaso.
" "	"	"
East Portland, Ore.	"	Lumber.
October, 1927—		
Portland, Ore.	O.-W. R. & N.	Gaso.
" "	"	"
" "	"	"
East Portland, Ore.	"	Lumber.
November, 1927—		
Kenton, Ore.	O.-W. R. & N.	Shingles.
Portland, Ore.	"	Gaso.
" "	"	"
" "	"	"
East Portland	"	Lumber.
December, 1927—		
Portland, Ore.	O.-W. R. & N.	Gaso.
2449 Carloads received at Vale, Oregon:		
January, 1927—		
Portland, Ore.	O.-W. R. & N.	Gasoline.
February, 1927—		
LaCamas, Wash.	O.-W. R. & N.	Lumber.
Linnton, Ore.	"	Lumber.
Portland, Ore.	"	Oil.
March, 1927—		
Portland, Ore.	O.-W. R. & N.	Gasoline.
Portland, Ore.	"	Oil.
" "	"	Gasoline.
Albina, Ore.	"	Lumber.
April, 1927—		
Portland, Ore.	O.-W. R. & N.	Gasoline.
East Portland, Ore.	"	Lumber.
Portland, Ore.	"	Gasoline.
May, 1927—		
Pittsburg, Calif.	RR O.-W. R. & N.	Steel.
Portland, Ore.	"	Gasoline.
" "	"	"
St. Johns, Ore.	"	Oil.
" "	"	"
" "	"	"
" "	"	"
Richmond, Calif.	RR "	Oil.
Richmond, Calif.	RR "	"
" "	RR "	"
" "	RR "	"
Portland, Ore.	"	"
Richmond, Calif.	"	"
Portland, Ore.	RR "	"
St. Johns, Ore.	"	Gasoline.
"	"	Oil.
Richmond, Calif.	RR "	"
"	RR "	"
Portland, Ore.	"	"
Richmond, Calif.	RR "	Gasoline.
June, 1927—		Oil.
Portland, Ore.	O.-W. R. & N.	Gasoline.
" "	"	"
" "	"	"
Eugene, Ore.	RR "	Lumber.
East Portland, Ore.	"	"
August, 1927—		
Portland, Ore.	O.-W. R. & N.	Gasoline.
" "	"	"
September, 1927—		
Portland, Ore.	O.-W. R. & N.	Gasoline.
Portland, Ore.	"	Oil.
" "	"	Gasoline.
" "	"	Oil and grease.
October, 1927—		
Everett, Wash.	O.-W. R. & N.	Shingles.
Portland, Ore.	"	Gasoline.
Willabridge, Ore.	"	Gasoline.

Exhibit showing receipt of various commodities at stations in Oregon on the Oregon Short Line Railroad for points of origin as shown—Continued

Origin	Routing	Commodity
2450 Carloads received at Ontario, Oregon:		
January, 1927—		
San Francisco, Calif.	SS O.-W. R. & N.	Sugar.
Portland, Ore.	" "	Gasoline.
" "	" "	Gasoline.
Melrose, Calif.	RR "	Autos.
February, 1927—		
Oakland, Calif.	SS O.-W. R. & N.	Soap.
San Francisco, Calif.	SS "	Sugar.
Portland, Ore.	" "	R. oil.
" "	" "	Gasoline.
" "	" "	"
" "	" "	"
" "	" "	Lub. oil.
Oakland, Calif.	SS "	Roofing paper.
San Francisco, Calif.	SS "	Fertilizer.
Melrose, Calif.	RR "	Autos.
March, 1927—		
Albina, Ore.	O.-W. R. & N.	Oyster shell.
San Francisco, Calif.	SS "	Sugar.
East Portland, Ore.	" "	Fertilizer.
Portland, Ore.	" "	Gasoline.
" "	" "	"
" "	" "	"
Portland, Ore.	" "	Pet. lub. oil.
" "	" "	Nap. dist.
East Portland, Ore.	" "	Autos.
Portland, Ore.	" "	Nap. dist.
Portland, Ore.	" "	Gasoline.
" "	" "	Pet. road oil.
Albina, Ore.	" "	Fir lumber.
Melrose, Calif.	RR "	Autos.
April, 1927—		
East Portland, Ore.	O.-W. R. & N.	Fir lumber.
San Francisco, Calif.	SS "	Sugar.
East Portland, Ore.	" "	Autos.
Richmond, Calif.	RR "	Road oil.
Portland, Ore.	" "	Gasoline.
" "	" "	"
" "	" "	"
" "	" "	"
Portland, Ore.	" "	Pet. lub. oil.
" "	" "	Nap. dist.
" "	" "	Lub. oil.
" "	" "	Gasoline.
" "	" "	"
" "	" "	"
" "	" "	"
Melrose, Calif.	RR "	Autos.
" "	RR "	"
" "	RR "	"
May, 1927—		
San Francisco, Calif.	SS O.-W. R. & N.	Sugar.
" "	SS "	Sugar.
Portland, Ore.	" "	Tractors.
" "	" "	Gasoline.
" "	" "	"
" "	" "	"
" "	" "	"
" "	" "	"
Portland, Ore.	" "	Lub. oil.
" "	" "	Binding twine.
Portland, Ore.	" "	Gasoline.
" "	" "	"
2451 Portland, Ore.	O.-W. R. & N.	Gasoline.
" "	" "	"
Albina, Ore.	" "	Fir lumber.
Olympia, Wash.	" "	Shingles.
Melrose, Calif.	RR "	Autos.
June, 1927—		
San Francisco, Calif.	SS O.-W. R. & N.	Sugar.
Portland, Ore.	" "	Gasoline.
" "	" "	"
" "	" "	"
" "	" "	"
Portland, Ore.	" "	Gasoline.
" "	" "	"
" "	" "	"
Portland, Ore.	" "	Lub. oil.
Oakland, Ore.	SS "	Roofing paper.
Melrose, Calif.	RR "	Autos.
" "	RR "	"

Exhibit showing receipt of various commodities at stations in Oregon on the Oregon Short Line Railroad for points of origin as shown—Continued

	Origin	Routing		Commodity
	Carloads received at Ontario, Oregon—Con.			
	July, 1927—			
	Seattle, Wash.		O.-W. R. & N.	Bags.
	Oakland, Calif.	SS	"	Soap.
	Portland, Ore.		"	Distillate.
	Portland, Ore.		"	Gasoline.
	" "		"	"
	" "		"	"
	" "		"	"
	" "		"	Pet. lub. oil.
	" "		"	Ref. oil.
	" "		"	Gasoline.
	" "		"	"
	" "		"	"
	" "		"	"
	Melrose, Calif.	RR	"	Autos.
	" "	RR	"	"
	" "	RR	"	"
	August, 1927—			
	San Francisco, Calif.	SS	O.-W. R. & N.	Sugar.
	"	SS	"	Sugar.
	Portland, Ore.		"	Gasoline.
	" "		"	"
	" "		"	"
	" "		"	"
	" "		"	"
	Portland, Ore.		"	Pet. lub. oil.
	"		"	Distillate.
	Richmond, Calif.	SS	"	Pet. lub. oil.
	Portland, Ore.		"	" " "
	Portland, Ore.		"	Gasoline.
	" "		"	"
	San Francisco, Calif.	SS	"	Sugar.
	Melrose, Calif.	RR	"	Autos.
	" "	RR	"	"
	" "	RR	"	"
	September, 1927—			
	San Francisco, Calif.	SS	O.-W. R. & N.	Sugar.
	Portland, Ore.		"	Gasoline.
	" "		"	"
	" "		"	"
2452	Portland, Ore.		O.-W. R. & N.	Gasoline.
	" "		"	"
	Portland, Ore.		"	Pet. products.
	" "		"	" lub. oil.
	" "		"	Gasoline.
	" "		"	"
	" "		"	"
	Portland, Ore.		"	Lub. oil.
	" "		"	"
	Melrose, Calif.	RR	"	Autos.
	" "	RR	"	"
	October, 1927—			
	Portland, Ore.		O.-W. R. & N.	Cereals.
	San Francisco, Calif.	SS	O.-W. R. & N.	Sugar.
	Portland, Ore.		"	Gasoline.
	" "		"	"
	" "		"	"
	" "		"	"
	Portland, Ore.		"	Gasoline.
	" "		"	"
	" "		"	"
	" "		"	"
	" "		"	"
	Melrose, Calif.	RR	"	Autos.
	" "	RR	"	"
	" "	RR	"	"
	" "	RR	"	"
	Oakland, Calif.	SS	"	Roofing paper.
	November, 1927—			
	Portland, Ore.		O.-W. R. & N.	Soap.
	San Francisco, Calif.	SS	"	Sugar.
	Willabridge, Ore.		"	Gasoline.
	" "		"	"
	" "		"	"
	" "		"	"
	Willabridge, Ore.		"	Gasoline.
	" "		"	"
	" "		"	"
	Portland, Ore.		"	Poultry feed.
	Melrose, Calif.	RR	"	Autos.

Exhibit showing receipt of various commodities at stations in Oregon on the Oregon Short Line Railroad for points of origin as shown—Continued

Origin	Routing	Commodity
Carloads received at Ontario, Oregon—Con.		
December, 1927—		
San Francisco, Calif.	SS O.-W. R. & N.	Sugar.
" "	SS " "	Sugar.
Portland, Ore.	" "	Gasoline.
" "	" "	"
Portland, Ore.	" "	Lub. oil.
" "	" "	Ref. oil.
" "	" "	"
Portland, Ore.	" "	Gasoline.
" "	" "	"
Melrose, Calif.	RR " "	Autos.
" "	" "	"
2453 Carloads received at Crane, Oregon:		
April, 1927—		
Portland, Ore.	O.-W. R. & N.	Gasoline.
July, 1927—		
Melrose, Calif.	RR O.-W. R. & N.	Autos.
Portland, Ore.	" "	Gasoline.
August, 1927—		
Portland, Ore.	O.-W. R. & N.	Gasoline.
" "	" "	"
September, 1927—		
Melrose, Calif.	RR O.-W. R. & N.	Autos.
Portland, Ore.	" "	Gasoline.
October, 1927—		
Melrose, Calif.	RR O.-W. R. & N.	Autos.
Portland, Ore.	" "	Gasoline.
" "	" "	"
" "	" "	"
Portland, Ore.	" "	Oil.
" "	" "	"
Portland, Ore.	" "	Steam shovel.
Du Pont, Wash.	" "	Powder.
November, 1927—		
Portland, Ore.	O.-W. R. & N.	Culverts.
Melrose, Calif.	RR " "	Autos.
Portland, Ore.	" "	Gasoline.
" "	" "	Oil.
December, 1927—		
Portland, Ore.	O.-W. R. & N.	Gasoline.
Received at Harper, Oregon:		
April, 1927—		
Portland, Ore.	O.-W. R. & N.	Lumber.
December, 1927—		
Portland, Ore.	O.-W. R. & N.	Machinery.
" "	" "	Oil.

2454

I. C. C. docket No. 19680

Exhibit No. ———— *Witness Madden*

Before the Interstate Commerce Commission

PUBLIC SERVICE COMMISSION OF OREGON

vs.

CENTRAL PACIFIC RAILWAY COMPANY ET AL.

I. C. C. docket No. 19680

AGRICULTURAL DATA, 10 SOUTHWESTERN IDAHO COUNTIES

Exhibit of the Public Utilities Commission of Idaho

2455 *Area irrigated in 1902; area enterprises capable of irrigation, 1920, in the 10 southwestern counties of Idaho*

Watershed	Area irrigated, 1902	Area enterprises capable of irrigating, 1920	Counties
	Acres	*Acres*	
Owyhee River	0	11,760	Owyhee.
Boise "	84,438	368,854	Ada.
Payette "	50,893	117,011	Boise, Valley, Gem, and Payette.
Weiser "	26,769	69,718	Adams and Washington.
Snake " (Gem dist.)	0	20,000	Owyhee.
Succor Creek	1,000	1,500	Owyhee.
Camas "	4,107	46,190	Elmore.
Bruneau River	12,862	23,011	Owyhee.
Little Salmon River			Adams.
Reynolds Creek	3,000	3,000	Owyhee.
Sinker "	500	2,500	Owyhee.
Total	183,569	663,544	

2456 *Dry land farmed in southwestern Idaho in 1927*

[Computed from proceedings of the State board of equalization]

County:	Dry land (acres)
Ada	0
Adams	27,830
Boise	11,576
Elmore	11,944
Gem	9,546
Payette	23,583
Valley	53,961
Washington	82,869
Total	221,309
Total dry land ..... acres	221,309
" irrigated land ..... acres	663,344
Grand total ..... acres	884,653

2457 *Capital invested in irrigation works in the 10 southwestern counties in Idaho*

[Source of information: U. S. census reports]

County	1899	1910	1920	County	1899	1910	1920
Ada	$1,073,165	$2,404,008	$5,669,338	Owyhee	$297,135	$1,274,833	$2,309,967
Adams [1]			394,060	Payette [5]			1,209,175
Boise [2]	85,190	160,487	148,484	Valley			147,110
Canyon [3]	745,845	4,507,866	10,233,513	Washington [4]	123,831	584,084	1,874,136
Elmore	530,132	1,008,403	1,606,335				
Gem [4]			1,492,559	Total	2,855,298	9,939,681	25,064,673
Since 1920, additional invested							$2,500,000

Change of county boundaries:

[1] Adams organized from Washington in 1911.
[2] Boise, part taken to form Gem in 1915; part taken to form Valley in 1917.
[3] Canyon, part taken to form Gem in 1915; part taken to form Payette in 191-.
[4] Gem formed from parts of Canyon and Boise in 1915.
[5] Payette organized from Canyon in 1917.
[4] Washington, part taken to form Adams in 1911.

2458 *Average cost per acre included in irrigation enterprises in 10 southwestern counties in Idaho*

County	1899	1910	1920	County	1899	1910	1920
Ada	4.29	36.41	42.38	Gem			28.33
Adams			9.25	Owyhee	2.88	24.89	21.29
Boise	3.41	3.87	10.57	Payette			16.92
Canyon	5.61	24.83	43.58	Valley			5.54
Elmore	9.47	14.27	31.15	Washington	2.58	4.67	31.44

2459 *Value of all farm property in the 10 southwestern Idaho counties*

County	1900	1910	1925	County	1900	1910	1925
Ada	$4,701,999	$23,194,379	$22,674,466	Owyhee	$1,935,619	$4,942,653	$9,577,099
Adams			4,972,137	Payette			8,535,477
Boise	1,340,402	5,276,403	1,580,697	Valley			3,490,954
Canyon	4,238,891	33,065,702	29,072,678	Washington	3,276,228	14,736,971	9,687,007
Elmore	1,034,258	4,768,965	5,417,582				
Gem			7,706,871	Total	16,527,397	85,985,073	102,714,968

2460 *Number of farms in southwestern Idaho*

County	1900	1910	1920	1925	County	1900	1910	1920	1925
Ada	769	1,503	2,198	2,193	Owyhee	274	348	785	786
Adams			484	437	Payette			763	768
Boise	437	773	238	200	Valley			309	334
Canyon	881	2,912	2,660	3,145	Washington	757	1,458	1,119	1,025
Elmore	152	374	502	407					
Gem			770	636	Total	3,270	7,368	9,828	9,931

2461 *Value of livestock on farms in the 10 southwestern Idaho counties*

County	1900	1920	1925	County	1900	1920	1925
Ada	$1,174,249	$5,046,630	$2,255,688	Owyhee	$1,157,633	$5,861,620	$2,267,252
Adams		1,032,677	531,175	Payette		1,882,765	624,730
Boise	588,852	415,441	175,505	Valley		464,696	301,691
Canyon	936,551	6,223,929	3,050,866	Washington	1,319,309	2,243,408	1,518,183
Elmore	630,009	2,077,577	1,122,268				
Gem		3,622,642	1,019,815	Total	5,806,603	28,811,385	12,867,173

2462 *Value of all crops in the 10 southwestern Idaho counties*

County	1910	1920	County	1910	1920
Ada	$1,302,622	$6,856,088	Owyhee	$368,565	$2,909,470
Adams		1,375,472	Payette		4,137,424
Boise	536,275	329,169	Valley		500,022
Canyon	1,979,084	11,312,282	Washington	1,095,450	3,133,250
Elmore	473,227	1,016,567			
Gem		2,219,048	Total	5,755,223	33,788,792

2463 *Acreage and production of six principal crops in Idaho*

[U. S. Agriculture Yearbook]

		1910	1920	1927 [1]			1910	1920	1927 [1]
Corn	acres	6,000	45,000	76,000	Wheat	acres	562,000	1,100,000	1,171,000
	bushels	192,000	1,620,000	3,116,000		bushels	12,603,000	24,600,000	32,374,000
Potatoes	acres	24,000	45,000	115,000	Oats	acres	184,000	185,000	143,000
	bushels	3,408,000	8,100,000	24,380,000		bushels	7,084,000	7,030,000	6,721,000
Apples	bushels	1,440,200	3,420,000	6,000,000	Grasses [2]	acres	491,000	1,175,000	1,115,000
						tons	1,473,000	2,985,000	3,313,000

[1] U. S. Bureau of Crop Estimates, 1927.
[2] All tame and cultivated.

2464 *Population in ten southwestern counties in Idaho, 1900, 1920, 1925*

County	1900	1920	1925 [1]	County	1900	1920	1925 [1]
Ada	11,559	35,213	38,686	Owyhee	3,804	4,604	5,000
Adams	.....	2,966	3,142	Payette	.....	7,021	7,973
Boise	4,174	1,822	2,069	Valley	.....	2,524	2,500
Canyon	7,497	26,932	30,584	Washington	6,882	9,424	9,977
Elmore	2,049	5,067	5,259				
Gem	.....	6,427	7,297	Total	35,965	102,110	112,937

[1] Bureau of census estimates.

2465 *Acreage and production of principal crops in 10 southwestern Idaho counties*

Commodity		1910	1920	Commodity		1910	1920
Corn	bushels	52,371	347,680	Barley	bushels	249,194	325,000
Potatoes	"	468,831	887,896	Alfalfa	tons	298,942	635,731
Apples	"	46,517	2,566,395				
Wheat	"	.....	.....	Total		3,043,416	8,265,000
Oats	"	1,101,617	460,535				

2466 *New reclamation projects now in process of construction*

Black Canyon:
- Gross acres 68,574
- Good land 47,803
- Pasture lands 3,555
- Net acres to be irrigated 51,358

Owyhee project in Idaho:
- Net acres new land 24,500
- Total new lands to be irrigated ..... 78,858 acres.

2467 *Carloads available from new projects for cross-State railroad*

Black Canyon:		Owyhee:	
Within 5 years	424 carloads.	Within 5 years	238 carloads.
After 5 years	424 "	After 5 years	238 "
Total	848 "	Total	476 "

Principal commodities to be grain, sheep, hogs, poultry, butter, eggs, potatoes.

2468 *Feasible projects available for future development in the 10 southwestern Idaho counties*

Dry Lake	22,900 acres.
Mora and Hillcrest	14,100 "
Boise extension	3,500 "
Mountain Home	400,000 "
Bruneau	280,000 "
Total	720,500 "

Estimated carloads these projects will provide for shipment over proposed railroad:

Dry Lake	254 carloads.
Mora and Hillcrest	156 "
Boise extension	38 "
Mountain Home	4,444 "
Bruneau	3,111 "
Total	8,003 "

Total area of farm land in the 10 southwestern Idaho counties, irrigated, dry land, area soon to be irrigated, and area susceptible of irrigation

Present irrigated land	663,344 acres.
Area soon to be irrigated	75,858 "
Area susceptible of irrgation	720,500 "
Dry land farmed	221,309 "
Total	1,681,011 "

2469 *Exhibit No. 10—Witness Madden*

I. C. C. docket No. 19680

Irrigation development in the State of Idaho

[U. S. census]

	1890	1900	1910: To July 1, 1910	1920: To Jan. 1, 1920
Capital invested in irrigation works	$1,029,000	$5,120,399	$40,977,688	$91,501,009
Average cost per acre		3.79	17.15	29.59
Estimated final cost of existing enterprises			58,451,106	97,019,717
Average cost per acre			16.47	25.67
Average cost of operation and maintenance		0.24	0.63	1.17

2470 *Exhibit No. 11—Witness Madden*

I. C. C. docket No. 19680

Assessed valuation of the territory now embraced in the 10 southwestern Idaho counties

[Source of information: State board of equalization]

County	1890	1926	County	1890	1926
Ada	$3,744,642.00	$39,913,942.50	Owyhee	838,271.00	5,358,572.50
Adams		4,679,616.50	Payette		5,641,165.92
Boise	711,982.00	3,286,513.00	Valley		5,072,605.00
Canyon		24,817,031.00	Washington	1,118,406.00	9,071,756.10
Elmore	1,063,499.00	10,098,457.24	Total	7,476,800.00	117,258,181.76
Gem		9,318,522.00			

2471 *Exhibit No. 12—Witness Madden*

I. C. C. docket No. 19680

Growth of bank deposits in Idaho

Year	National-bank deposits	State-bank deposits	Natl. & State banks, total deposits
1890	$1,398,000		
1900	3,799,000		
1906	10,269,000	$13,443,934.83	$23,371,288.83

Total deposits in national and State banks in Idaho on December 31, 1927, and the deposits on said date in national and State banks in 10 southwestern Idaho counties

State		$96,295,000.00
County:		
Ada	$16,439,000.00	
Adams	140,000.00	
Boise	33,000.00	
Canyon	5,271,000.00	
Elmore	937,000.00	
Gem	837,000.00	
Owyhee	216,000.00	
Payette	1,102,000.00	
Valley	391,000.00	
Washington	1,146,000.00	
Total		26,512,000.00

Sources: Department of Finance, Idaho.
Report of the Comptroller of the Currency.

2472 *Exhibit No. 14—Witness Smead*

I. C. C. docket No. 19680

LIVESTOCK DATA EXHIBIT OF PUBLIC UTILITIES COMMISSION OF IDAHO

Number of beef cattle, sheep, and hogs in 10 southwestern Idaho counties, 1925 census

County	Sheep	Hogs	Beef cattle	County	Sheep	Hogs	Beef cattle
Ada	78,326	9,009	6,214	Owyhee	81,693	4,011	25,474
Adams	7,560	2,385	7,433	Payette	12,114	4,321	3,830
Boise	317	768	2,920	Valley	423	899	2,834
Canyon	120,824	23,004	3,030	Washington	62,151	6,582	6,922
Elmore	64,542	691	7,655				
Gem	50,725	3,931	2,801	Total	478,715	55,601	69,103

2473 *Car-lot shipments of beef cattle, sheep, and hogs in 10 southwestern Idaho counties, 1921–1927*

Year	Beef cattle	Sheep	Hogs	Year	Beef cattle	Sheep	Hogs
1921	1,251	1,724	150	1925	1,507	1,600	347
1922	1,084	2,485	271	1926	1,463	1,767	403
1923	1,511	2,151	422	1927	1,394	1,803	482
1924	1,514	2,082	596				

2474

Exhibit No. 18

I. C. C. docket No. 19680

Development of the farmers cooperative creamery at Payette and Weiser, Idaho

Organized, 1915

		Lbs.			Lbs.
Manufactured,	1916	200, 440	Manufactured,	1923	1, 185, 569
"	1917	264, 409	"	1924	1, 917, 269
"	1918	428, 718	"	1925	2, 539, 639
"	1919	611, 266	"	1926	3, 010, 287
"	1920	656, 146	"	1927	3, 412, 537
"	1921	614, 948	Estimated,	1928	4, 000, 000
"	1922	807, 594			

Number of stockholders,			1916	400
"	"	"	1920	833
"	"	"	1923	1, 600
"	"	"	1927	3, 186
"	"	"	July 1, 1928	3, 455

2475

I. C. C. docket No. 19680

Exhibit No. 19—Witness Wagner

Before the Interstate Commerce Commission

PUBLIC SERVICE COMMISSION OF OREGON

vs.

CENTRAL PACIFIC RAILWAY COMPANY ET AL.

I. C. C. docket No. 19680

MARKET FOR SOUTHWEST IDAHO PRODUCTS, DAIRY AND POULTRY DEVELOPMENT

Exhibit of the Public Utilities Commission of Idaho

2476

DAIRY EXPANSION AND AVAILABLE MARKETS

Number of dairy producing cows in southwestern Idaho, 1909–1910–1924

	1910	1920	1925
Producing cows	13, 828	30, 976	41, 878
Heifers kept for milk		8, 388	10, 644
Total	13, 828	39, 364	52, 522

NOTE.—One-third of dairy cows in Idaho are in the southwest counties.

Car-lot exports of butter from Idaho

[Idaho Extension Bulletin No. 152]

Year:	Carloads
1923	188
1924	333
1925	434
1926	469

NOTE.—One-third of these originated in southwestern Idaho.

Where Idaho butter now goes—1926

Destination	Pounds	Per cent
San Francisco	1, 191, 000	9
Los Angeles	13, 101, 000	91

2477 *Growth of creameries located in southwestern Idaho*

	Number of pounds of butter produced	
	1926	1927
Farmer's cooperative creamery, Payette	3, 012, 861	3, 420, 435
Jensma Creamery Company, Nampa	515, 732	649, 944
Mutual Creamery Company, Boise	812, 014	917, 880
Swift & Company, Caldwell	1, 179, 484	1, 452, 880
Swift & Company, Weiser	474, 614	580, 740
Gem Creamery, Emmett	125, 500	129, 870
Idaho Creamery, Boise	27, 160	36, 720
Dairymen's coop. of Boise Valley, Caldwell	1, 386, 755	2, 084, 327
Boise Valley coop. creamery, Nampa & Boise	2, 104, 360	[1] 1, 008, 142
Namma Creamery Company, Nampa	None.	[2] 63, 000
Total	9, 638, 480	10, 344, 568

	Number of pounds of condensed milk	
	1926	1927
Carnation Milk Products Company, Nampa	9, 368, 929	10, 946, 138

1928 will show an increase over 1927.

[1] Six months only.
[2] Three months only.

NOTE.—Pounds of butterfat produced in said territory in 1919 were 3,354,615.

The following figures show the very rapid development of the dairymen's coop. creamery of Boise Valley, Caldwell, Idaho:

	Number of pounds of butter produced
First year of operation, May 15, 1925, to May 15, 1926	938, 103
Second year of operation, May 15, 1926, to May 15, 1927	1, 619, 062
Third year of operation, May 15, 1927, to May 15, 1928	2, 366, 061

2478 *Car-lot exports of eggs from State of Idaho compared with exports from southwestern counties*

Year	State	South-western counties	Per cent of State's shipments
1923	188	132	70
1924	240	143	59
1925	207	133	64
1926	276	186	67
1927	------	208	------

Idaho Extension Bulletin No. 154, page 27.

Carloads of eggs shipped during first five months of 1927 compared with first five months of 1928

	Carloads, 1927	Carloads 1928
January	6	8
February	6	9
March	22	23
April	26	31
May	19	28
Total	79	99

Principal markets for Idaho eggs

Destination	Cases, 1925	Cases, 1926
Los Angeles	62,048	56,135
San Francisco	6,306	10,411

2479 *Chickens on farms in southwestern Idaho and per cent of State's total chickens in district*

Year	No. chickens	% of State's total chickens
1910	198,000	26.6
1920	399,000	23.7
1925	599,000	29.1

Idaho Extension Bulletin No. 154.

Car-lot exports of dressed poultry from Idaho and per cent originating in southwestern counties

Year	State	South-western counties	Per cent of State's shipment
1923	62	32	51
1924	151	83	54
1925	114	71	62
1926	137	77	54
1927	------	113	------

Idaho Extension Bulletin No. 154, page 27.

Principal markets for Idaho dressed poultry

[Idaho Ext. Bulletin No. 154, page 31]

Origin of dressed poultry	At San Francisco, 1926	At Los Angeles, 1926
Idaho	20%	19%
Other coast States	57%	20%
Middle West States	16%	44%

2480

Exhibit No. 22

HARNEY VALLEY PROJECT

Crop	Area	Yield	Total	Tons
Sugar beets	10,000	10 tons.	100,000	
Wheat	7,500	30 bu.	6,750	
Barley	7,500	35 "	6,400	
Oats	7,500	40 "	4,800	
Potatoes	7,500	150 "	33,750	
Alfalfa	21,230	3 tons.	63,690	
	61,230			215,390

BLITZEN VALLEY PROJECT

Sugar beets	7,500	10 tons.	75,000	
Wheat	4,000	30 bu.	3,600	
Barley	4,000	35 "	3,360	
Oats	4,000	40 "	2,560	
Potatoes	4,000	150 "	18,000	
Alfalfa	11,150	3 tons.	33,450	
	34,650			135,970

SILVER CREEK PROJECT

Sugar beets	3,000	10 tons.	30,000	
Wheat	2,000	30 bu.	1,800	
Barley	2,000	35 "	1,680	
Oats	2,000	40 "	1,280	
Potatoes	2,000	150 "	9,000	
Alfalfa	5,000	3 tons.	15,000	
	16,000			58,760

2481

Exhibit No. 23

I. C. C. docket No. 19680

Before the Interstate Commerce Commission

PUBLIC SERVICE COMMISSION OF OREGON

vs.

CENTRAL PACIFIC RAILWAY COMPANY ET AL

I. C. C. docket No. 19680

CARLOADS OF AGRICULTURAL COMMODITIES ORIGINATING IN 10 SOUTHWESTERN IDAHO COUNTIES

Exhibit of The Public Utilities Commission of Idaho

2482 *Carloads of various agricultural commodities originating in 10 southwestern Idaho counties and estimates of the portion of which will move via proposed railroad*

[1927 Idaho Public Utilities Commission records]

Commodity	Cars loaded	Estimate of cars to move via proposed railroad	Commodity	Cars loaded	Estimate of cars to move via proposed railroad
Barley	31	7	Hogs	484	240
Corn	25	6	Horses & mules	135	65
Oats	95	20	Sheep	1,803	600
Wheat	1,105	280	Eggs	208	104
Hay	476	47	Poultry	113	67
Apples	4,909	490	Butter	348	174
Potatoes	979	98			
Vegetables	578	146	Total	12,684	3,028
Cattle	1,394	650			

2483 *Additional carloads available in 1931 from present area in dairy and poultry products, applying rate of expansion during last three years to next three years*

Commodity	Carloads	Per cent increase since 1925
Eggs	60	58
Poultry	33	50
Butter	45	26
Total	138	

Additional carloads available by 1933 from bringing into production one-half of 51,350 acres, or 25,679 acres, on the Black Canyon project, assuming that twenty acres of land produce one carload of produce

[On this acreage there would be produced 1,283 carloads of produce as shown in column 1. Assuming that the crops produced would be in the same proportion to those shipped from this section in 1927, the following table shows the amount of each commodity produced:]

Commodity	Carloads produced	Est. carloads which would move over proposed route first five years	Est. total carloads which would move over proposed route when project in full production
Barley	5	2	4
Corn	4	2	4
Oats	14	4	8
Wheat	182	36	72
Hay	78	8	16
Potatoes	165	83	166
Vegetables	94	19	38
Cattle	232	116	232
Hogs	80	40	80
Horses & mules	21	10	20
Sheep	301	100	200
Eggs	33	7	14
Poultry	18	9	18
Butter	56	50	100
Total	1,283	486	972

2484 *Summary of carloads of agricultural commodities from 10 southwestern Idaho counties to move via proposed railroad*

When available:	Carloads	
At present	3,028	
Dairy and poultry industries within five years, due to their natural development	138	
Within 5 years from Black Canyon project to be irrigated	486	
Total within 5 years	3,652	3,652
After 5 years addition from projects now under construction	486	486
Total after 5 years		4,138
Potential traffic from Dry Lake, Mora, and Hillcrest, Boise extension, Mt. Home and Bruneau projects, for westbound movement	8,003	8,003
Grand total		12,141

2485 *Exhibit No. 24—Witness L. K. Cramb*

Before the Interstate Commerce Commission

PUBLIC SERVICE COMMISSION OF OREGON

vs.

CENTRAL PACIFIC RAILWAY

Exhibit of the city of Bend, Oregon, and the Bend Chamber of Commerce

[By L. K. Cramb, secretary, Bend Chamber of Commerce]

2486 INTRODUCTORY STATEMENT

The city of Bend and the Bend Chamber of Commerce join with the Public Service Commission of Oregon in support of its petition for a cross-State railroad to develop the State and to provide more direct transportation facilities to the Middle West and East, and also more direct rail connections between the eastern and western parts of the State.

It is the position of the city of Bend and the Bend Chamber of Commerce that a railroad from Bend to Crane offers all the advantages of a road from Crane to Crescent Lake and will serve the State better; that such a line, skirting the southern border of the Ochoco Mountains, will develop a much greater volume of tonnage than would a road from Crane to Crescent Lake.

The region northwest of Bend, via Sisters, across the Cascades Mountains to Albany and Salem, is heavily timbered. To harvest this timber railroad construction from Bend to Sisters and beyond will be necessary, and from Albany and Salem eastward. In fact, a logging road of standard construction is now contemplated from Albany via Foster to tap the western slope of the Cascades in this area. Plans for the construction of an east-west railroad should taken into consideration a railroad from Bend to Albany or Salem.

A railroad from Crane to Bend, and eventually west via Sisters, across the Cascade Mountains at or near Hogg Pass, will afford the relief asked for in the complaint and testimony offered by the Public Service Commission of Oregon, and in addition tap richly timbered areas, which must eventually have railroad facilities.

2487 *Agricultural statistics, Deschutes County*

	Jan. 1, 1920 Fed. cen.	Jan. 1, 1925 Fed. farm cen.	Jan. 1, 1928 est.[1]
Number of farms	721	670	800
Operated by owners	640	557	675
Managers	6	5	5
Tenants	105	108	120
Farm acreage: All land in farms	144,979	108,629	117,500
Farm values	$5,120,960	$4,647,190	$6,000,000
Land alone	4,425,600	3,798,835	4,750,000
Buildings	695,360	848,355	1,250,000
Livestock on farms:			
Horses	3,378	2,852	3,000
Mules	103	43	50
Cattle, total	11,616	10,872	12,200
Beef cows [2]	3,292	1,905	2,000
Other beef cattle	5,127	2,780	2,800
Dairy cows [2]	1,889	3,780	4,150
Other dairy cattle	1,308	2,469	3,250
Total dairy animals	3,197	6,249	7,400

[1] Figures in third column are estimates based on information furnished by W. T. McDonald, county agent, Deschutes County.
[2] Cows and heifers two years old and older.

Principal crops		1919	1924	1927
Oats	acres	927	307	800
	bushels	20,631	9,634	24,000
Wheat	acres	1,166	623	1,200
	bushels	14,084	10,718	36,000
Rye	acres	1,667	319	400
	bushels	9,300	1,850	4,000
Hay	acres	24,981	19,505	18,000
	tons	36,002	34,697	54,000
Potatoes	acres	1,250	899	2,500
	bushels	85,610	79,034	410,000
Clover for seed	acres			1,800
	cars			4
Barley	acres			600
	bushels			18,000

2488 *Deschutes County irrigation districts*

Central Oregon irrigation district:
Irrigible acres, 48,549 (9,804 acres in Crook County).
Acres privately owned, 48,549.
Acres under cultivation, 32,000.
Operating cost, $1.70 an acre.
Deschutes County municipal improvement district (Tumalo project):
Irrigible acres, 15,389.
Acres privately owned, 14,000.
Acres under cultivation, 6,500.
Operating cost, $2 an acre.
Deschutes Reclamation and Irrigation Company (Swalley district):
Irrigible acres, 6,639.
Acres privately owned, 6,639.
Acres under cultivation, 3,000.
Operating cost, 18 cents to 90 cents an acre. (Farmers look after laterals.)

Arnold Irrigation Company:
Number irrigible acres, 9,336.
Acres under cultivation, 2,000.
Acres privately owned, 9,336.
Operating cost, $1 an acre.
Squaw Creek irrigation district:
Irrigible acres, 8,100.
Privately owned, 8,100.
Under cultivation, 8,100.
Operating cost, $1.25 an acre.
Snow Creek irrigation district:
Irrigible acres, 2,000.
Privately owned, 2,000.
Under cultivation, 1,100.
Operating cost, 70 cents an acre.
Free water rights:
Number acres, 7,000.
All privately owned and under cultivation.

2489 RECAPITULATION

Total irrigable acres	97,013
Total acres privately owned	95,624
Total acres under cultivation	59,700
Total acres not cultivated	37,313

On the basis of one family to each 80 acres of irrigated land it will take 466 families to complete settlement of these projects in Deschutes County (9,804 acres in Crook County). The tendency, however, is for the average size of irrigated farms to get smaller; that is, it is found to be more profitable to farm a fewer number of acres more intensively. So that, with the bringing into full cultivation of land not now being farmed and the reduction in the size of farms the farm population of these projects will eventually more than double the present population.

FUTURE IRRIGATION DEVELOPMENT

Approximately 150,000 acres of land in central Oregon, (Deschutes, Jefferson, and Crook Counties) will at some future time come under irrigation. This is what is known as the Deschutes project, and has been pronounced feasible by the Reclamation Department of the Federal Government. A bill in Congress providing for the reclamation of the north unit (approximately 100,000 acres) of the Deschutes project passed the Senate last winter without any opposition and is now on the Calendar of the House.

2490 *School census, Deschutes County outside of Bend, 1916 to 1927*

1916	1,137	1922	1,201
1917	1,001	1923	1,209
1918	1,053	1924	1,294
1919	1,041	1925	1,285
1920	1,062	1926	1,356
1921	1,239	1927	1,506

Increase from 1925 to 1927, 221, which represents an increase of about 773 in the farm population of Deschutes County in two years. (Factor 3½ used to ascertain population based on school census.) This, however, includes the city of Redmond, but as this city is dependent entirely upon agriculture, any increase in its population is dependent upon farm population and farm prosperity.

Increase due largely to colonization campaign by Bend Chamber of Commerce in co-operation with land settlement department of Portland chamber and State chamber of commerce: also to better methods of farming and diversification.

2491 TIMBER RESOURCES TRIBUTARY TO BEND

[Prepared from information furnished by H. L. Plumb, formerly supervisor, Deschutes National Forest]

GENERAL STATEMENT.—Bend is the logical manufacturing point for one of the finest bodies of yellow-pine timber in the United States. The trade name is "Pondosa pine," taken from the scientific name Pinus Ponderosa. The timber from the head waters of the Metolius River to the Walker Rim south of Crescent is considered tributary to the Bend mills. An estimate of the stand of timber follows;

Private timber tributary to Bend

Yellow pine	8, 400, 000, 000 ft. b. m.
Lodgepole pine and other species	200, 000, 000 ft. b. m.
	8, 600, 000, 000 ft. b. m.

National forest timber tributary to Bend

Yellow pine	4, 208, 000, 000
Douglas fir	243, 000, 000
Lodgepole pine	930, 000, 000
Other species	834, 000, 000
	6, 215, 000, 000 ft. b. m.
National forest timber	6, 215, 000, 000
Private timber	8, 600, 000, 000
Total	14, 815, 000, 000 ft. b. m.

FUTURE TIMBER OPERATIONS.—At the present rate of cutting, amounting to about 300,000,000 feet per year. the timber will last nearly 49 years, including both Government and private timber. With reforestation and selective cutting, now required of timber purchased from the Government, the supply will last indefinitely.

CUT-OVER LAND.—There are at present about 90,000 acres of cut-over land in the vicinity of Bend. More attention to the protection of the young trees on cut-over land is being given by both the lumber companies, the State and the Federal Government, through more careful logging and protection from fire.

REFORESTATION.—The Forest Service insists on leaving about 20 per cent of the volume per acre standing where timber is sold from Government lands. This will provide for another cut in 60 years,
and thus tend to make the logging industry perpetual. With
2492 properly adjusted forest taxes private companies could afford
to log their land on the same basis and thus keep the mills running indefinitely.

OCHOCO NATIONAL FOREST TIMBER.—The above computation does not take into consideration timber in the Ochoco National Forest, amounting to approximately five billion feet, which may be milled in Bend. Whether milled in Bend or Prineville the manufactured lumber would go to eastern markets.

2493 *Lumber shipments out of Bend, 1927*

Distribution of cars by States	B.-S. Co.	S.-H. Co.	Both	Distribution of cars by states	B.-S. Co.	S.-H. Co.	Both
California	165	12	177	New Mexico	2	1	3
Colorado	122	100	222	New York	672	530	1,202
Connecticut	136	114	250	North Carolina			
Delaware	1	2	3	North Dakota	2	18	20
District of Columbia	20	13	33	Ohio	71	307	378
Idaho	3	41	44	Oklahoma	12	23	35
Illinois	282	384	666	Oregon	77	77	154
Indiana	52	51	103	Pennsylvania	229	554	783
Iowa	254	722	976	Rhode Island	50	11	61
Kansas	75	105	180	South Dakota	23	76	99
Kentucky				Tennessee	10		10
Louisiana	1		1	Texas	67	5	72
Maine	29	10	39	Utah	25	246	271
Maryland	22	10	32	Vermont	4	7	11
Massachusetts	142	77	219	Virginia	2	10	12
Michigan	678	201	879	Washington	15	45	60
Minnesota	246	703	949	West Virginia	2	12	14
Missouri	43	98	141	Wisconsin	161	308	469
Montana	1	5	6	Wyoming	17	83	100
Nebraska	167	98	259	Canada	4		4
Nevada		4	4	Export	4	14	18
New Hampshire	26	12	38				
New Jersey	241	187	428		4,155	5,270	9,425

B.-S. Co.—Brooks-Scanlon Lumber Co.
S.-H. Co.—the Shevlin-Hixon Co.

2494 ANALYSES OF LUMBER SHIPMENTS

During 1927, 5,630 cars of lumber from the Bend mills went east of the Mississippi River. This represents 59.7 per cent of the total shipments. The construction of the cross-State line from Bend direct to Crane would bring markets east of the Mississi River nearly 200 miles nearer. Construction of a cross-State line direct from Bend to Crane would also bring the markets in States along the Union Pacific system approximately 200 miles nearer. This represents 1,853 cars shipped during 1927, or 19.6 per cent of total shipments, which together with shipments east of the Mississippi River represents 7,483 cars, or 79.3 per cent of total shipments.

Shipment, lumber, from Bend, 1922 to June 30, 1928

1922	7,869 cars.	1927	9,425 cars.
1923	8,562 "	1928 first six months	6,477 "
1924	11,056 "		
1925	11,712 "	Total, 6½ years	66,064 "
1926	10,963 "	Average annual shipments	10,163 "

Average freight paid on car of lumber, $414.
Approximate total freight paid, 6½ years, $27,351,506.
Freight, 1928, on basis present shipments, $5,362,956.

2495 PRESENT AND FUTURE TONNAGE CROSS-STATE RAILROAD ORIGINATING AT OR NEAR BEND, OREGON

1. LUMBER.—Average cars lumber shipped out of Bend each year past 6½ years was 10,163. Shipments first six months, 1928, were 6,477, and total shipments for 1928 will amount to nearly 13,000 cars. In view of increased demand due to decreasing supply of southern pine lumber this will not likely decrease but will increase.

Johnson-Gilchrist interests own about one billion feet pine timber in vicinity of Sisters and own a mill site in Bend with rights of way for logging road. With the cutting of this timber the shipments from Bend will be increased.

Ralph Gilchrist interests own about a billion feet of pine timber in the vicinity of Lapine, which will be milled in Lapine or Bend.

Therefore, it is not too much to expect the output of the Bend mills will amount to 18,000 cars annually within five years, the greater part of which would move over a line from Bend to Crane on account of shorter distance.

2. PAPER PULP.—Engineering studies as to the feasibility of pine waste and lodgepole pine in the manufacture of paper pulp and paper were made two or three years ago for the Brooks-Scanlon Lumber Co., with the conclusion that a high-grade kraft paper suitable for heavy wrapping and strong bags could be made economically from western pine and lodgepole pine. As sources of pulp supply in eastern and southern timbered areas are becoming exhausted, the time is not far distant when a pulp mill will be established in Bend. The Brooks-Scanlon Lumber Co. have had under consideration the establishment of a 200-ton pulp plant to use waste from its mill.

3. AGRICULTURE AND LIVESTOCK.—Mr. W. L. Teutsch estimates the shipment of clover seed via the cross-State line will increase from three cars to 15 in five years. There will be shipped this year six or seven cars, so his estimate is very conservative.

He 'stimates there will be no increase in the shipment of sheep and wool, which he gives as 341 cars. Bringing additional acreage into cultivation in central Oregon with many farmers turning to farm flocks of sheep would seem to indicate that Mr. Teutsch's figures on potential tonnage from sheep and wool are entirely too low.

Turkeys: 3½ cars of turkeys were shipped east from Redmond last year and from 6 to 8 will be shipped this year. In view of
2496 the fact that turkeys raised in central Oregon are of superior quality and that the industry have been found to be very profitable, it is probable shipments will continue to increase.

Eggs: Seven cars of eggs were shipped out of Bend and Redmond the past year by the central Oregon poultry cooperative for eastern consumption. Four cars are now in storage. On account of lack of volume it was necessary to ship these in case lots to Portland for reshipment east. Central Oregon is better adapted to the poultry industry than Petaluma, California, and within a year a two-car-lot shipment will be made directly east.

4. DIATOMITE.—At lower Bridge, west of Terrebonne and 25 to 30 miles from Bend, is a deposit of diatomite. This deposit contains about 10,000,000 tons, which is lighter, whiter, purer, and finer than that found in any other part of the country.

Mr. Arthur Krieger, managing director of the Atomite Corporation, says 10 cars monthly are being shipped at the present time, that he expects to ship 500 cars next year, and 1,000 cars in 1930.

Ninety per cent of shipments go east and would use cross-State railroad. Twenty-five tons are shipped in each car.

The use of diatomite is comparatively new. Fifteen years ago 40 cars were shipped from all the diatomite mines in the United States; last year, 10,000 carloads shipped.

2497 *Railroad mileage, present and proposed lines*

	To Granger	To St. Louis	To Chicago
FROM EUGENE			
Via Klamath Falls, Black Butte, Roseville (present route)	1,337	2,698	2,66
Via Klamath Falls, Alturas, Fernley (New S. P. cut-off)	1,125	2,486	2,47
Via Portland, S. P. & S., G. N., St. Paul		2,610	2,36
Via Portland, S. P. & S., G. N., St. Paul		2,660	2,44
Via Portland, S. P. & S., N. P., Burlington		2,525	2,33
Via Portland, U. P., Granger, Omaha	1,064	2,425	2,38
Via Crescent Lake, Crane, Ontario (public service commission line)	919	2,280	2,22
Via Crescent Lake, cut-off to 41 miles south Bend on G. N., Bend, Crane, Ontario, Granger (Bend line)	955	2,316	2,26
Via Crescent Lake to Bend, Prineville, Burns, Ontario (Prineville line)	991	2,352	2,33
Saving, public service commission line to Chicago:			
Over present route via Roseville	418		
Over S. P. via Alturas cut-off	216		
Over via Portland, G. N., St. Paul	139		
Over via Portland, U. P., Granger, Omaha	145		
Saving, via Bend line to Chicago:			
Over present route via Roseville	382		
Over S. P. via Alturas cut-off	180		
Over via Portland, G. N., St. Paul	103		
Over via Portland, U. P., Granger, Omaha	109		
Over public service commission line, 36 farther.			
FROM ALBANY			
Via Klamath Falls, Black Butte, Roseville	1,381	2,742	2,71
Via Klamath Falls, Alturas, Fernley, Granger	1,169	2,530	2,50
Via Portland, S. P. & S., G. N., St. Paul		2,556	2,30
Via Portland, S. P. & S., N. P., St. Paul		2,616	2,39
Via Portland, S. P. & S., N. P., Burlington		2,481	2,29
Via Portland, U. P., Granger, Omaha	1,020	2,381	2,33
Via Eugene, Crescent Lake, Crane, Ontario (public service commission line)	963	2,324	2,28
Via Detroit, Bend, Crane, Ontario (Bend line)	929	2,290	2,25
Via Detroit, Prineville, Burns, Ontario (Prineville line)	946	2,307	2,27
(Via proposed road, Albany to Foster, distance would be practically the same.)			
2498 Saving, public service commission line to Chicago:			
Over present route via Roseville	418		
Over S. P. via Alturas cut-off	216		
Over via Portland, G. N., St. Paul	51		
Over via Portland, U. P., Granger, Omaha	57		
Saving, Bend line to Chicago:			
Over present route via Roseville	452		
Over S. P. via Alturas cut-off	240		
Over via Portland, G. N., St. Paul	85		
Via Portland, U. P., Granger, Omaha	91		
Over public service commission line	34		
FROM KLAMATH FALLS			
Via Black Butte, Roseville (present line)	1,144	2,505	2,47
Via Cornell, Alturas, Fernley (S. P. cut-off)	932	2,292	2,26
Via S. P.-G. N. Jct., Crane, Ontario (com. line)	897	2,258	2,23
Via Bend, Crane, Ontario (Bend line)	940	2,301	2,27
Via Bend, Prineville, Burns, Ontario (Prineville line)	975	2,336	2,30
Via Bend, Wishram, S. P. & S., Spokane, St. Paul, via Great Northern			2,45

NOTE.—Construction of the Alturas cut-off will reduce to distance east over the Southern Pacific by 212 miles. While the distance from Klamath Falls to Chicago would be 34 shorter via the proposed cross-State line than via Alturas, the logical outlet for Klamath Falls shipments will continue to be over the Southern Pacific, as that is the originating line.

Klamath Falls to St. Paul via Bend, 2,024 miles.

Railroad mileage, present and proposed lines—Continued

	To Granger	To St. Louis	To Chicago
FROM BEND			
Via Oregon Trunk, Great Northern, St. Paul			2,307
Via Oregon Trunk, Northern Pacific, St. Paul			2,357
Via Northern Pacific, Burlington, Omaha		2,388	2,427
Via Northern Pacific, Burlington, Lincoln		2,347	
Via Union Pacific, via Sherman, Ontario, Granger, Omaha	986	2,347	2,318
Via Great Northern, Southern Pacific (Chemult, Klamath Falls, Alturas, Fernley, Granger)	1,076	2,437	2,408
Via Great Northern, cross-State line, Crane, Ontario, Granger	860	2,221	2,192
Via Bend line, Crane, Ontario, Granger	794	2,155	2,126
Via Prineville, Burns, Ontario, Granger	830	2,191	2,162
2499 Saving, Bend line to Chicago:			
Over via Oregon Trunk, G. N., St. Paul 181			
Over Northern Pacific, Burlington 301			
Over U. P. via Sherman, Granger 192			
Over G. N., S. P., via Alturas 283			
Over G. N. and pub. ser. com. line 65			
Over Prineville route 36			

	To St. Louis	To Chicago
FROM BEND		
If northern lines should build cross-State line to Crane, common user Crane to Ontario, Union Pacific or new line Ontario to Cheyenne, own lines on east	2,090	2,169
Shortest present route, northern lines	2,347	2,307
Saving, new line	257	128
Shortest route, Union Pacific system	2,347	2,318
Saving over Union Pacific	257	149
FROM CRANE TO PORTLAND		
Via Ontario, present route		557
Via Crescent Lake, Eugene, public service com. route		406
Via Bend route to Bend, Crescent Lake, Eugene		422
Via Bend, Detroit, Albany, Bend route and line to Albany		372
Via Prineville, Detroit, Albany, Prineville route		389
Saving, Bend line via Albany to Portland:		
Over present route via Ontario 185		
Over public service commission line 34		
Over Bend line and via Crescent Lake and Eugene 70		

Klamath Falls to Bend	145	Granger to St. Louis	1,361
Bend to Wishram	151	Granger to Chicago	1,332
Bend to Sherman	148	Spokane to St. Paul, G. N	1,455
Sherman to Granger	838	St. Paul to Chicago	431
Wishram to Spokane	270		

2500 *Elevations, Bend to Crane, Oregon*

[Taken from First-order Leveling in Oregon, Henry G. Avers, United States Department of Commerce, U. S. Coast and Geodetic Survey, 1926]

[While this is not the exact route of the proposed railroad from Bend to Crane, it gives a fairly good idea of the contour of the country]

Bend, 3,629.
Millican, 4,303.
10¼ miles east Millican, 4,397.
22¼ miles west Brookings, 4,650.
Brookings, 4,416.
16¼ miles west Gap ranch, 15 feet south Bend-Burns road, 4,580.
Gap ranch, 4,458.
Wagontire, 4,797.
Burns, 4,148.
2 miles east Lawen, 4,098.
Crane, 4,136.

Elevations over Blue Mountains

[Taken from Union Pacific folder]

Sherman, 170 (36)—distance to next place.
Arlington, 225 (78).
Pendleton, 1,069 (11).
Cayuse, 1,414 (10).
Gibbon, 1,749 (11).
Cuncan, 2,306 (10).
Huron, 2,915 (7).
Meacham, 3,680 (6).
Kamela, 4,205 (11).
Hilgard, 3,008 (8).
Lagrande, 2,788 (13).
Union Junction, 2,718 (10).
Telocaset, 3,449 (9).
North Powder, 3,251 (20).
Baker, 3,438 (14).
Pleasant Valley, 3,746 (13).
Durkee, 2,657 (9).
Weatherly, 2,405 (12).
Huntington, 2,116.

2501 FEASIBILITY OF RAILROAD, ALBANY TO BEND

The following is taken from sheets No. 9 and 10, docket No. 14392, report of C. I. Kephart, examiner, to Interstate Commerce Commission, after hearings held in connection with complaint of Public Service Commission of Oregon vs. Central Pacific Railway Company et al.

"In this connection reference is made by the Southern Pacific to an apparently feasible route over the Cascades between Bend and Albany, already surveyed, which would pass through the village of Sisters, over Hogg's Pass, 55 miles north of Odell Lake, and thence down the Santiam River. A road over this route would be less expensive to construct than over the Natron cut-off and would serve more heavily forested timber areas on both sides of the mountains, pine on the east and fir on the west. This cut-off may be worthy of future consideration after a line from Burns to Prineville or Bend may have been constructed and the contiguous territory more intensively developed. But for the present purposes a cross-State route over the Natron cut-off touching western Oregon farther south is not only preferable but would assist in promptly placing on a profitable basis the fund now being expended on that work."

Statement showing total carloads and total tons of carload freight originating at or destined to points on Southern Pacific lines in Oregon and Oregon points on other roads

(a) Represents outbound movement; (b) represents inbound movement, or the reverse movement to that indicated in (a)

PERIOD: JANUARY, MARCH, MAY, JULY, SEPTEMBER, AND NOVEMBER, 1926, WITH TOTALS FOR THE TWELVE MONTHS OF 1926

From or to (as shown below)	Benton		Clackamas		Clatsop		Coos		Douglas		Jackson		Josephine		Klamath		Lane		Lincoln		Linn		Marion		Multnomah		Polk		Tillamook		Washington		Yamhill	
	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	To
To—																																		
(a) Oregon points on other roads	29	739	390	11,561	42	887			110	2,376	212	9,873	4	55	37	1,083	111	3,654	45	1,673	94	2,314	539	18,499	37	1,009	71	2,042	389	15,867	122	3,584	207	6
(a) California	185	5,628	405	9,008			95	2,286	461	14,179	833	21,735	68	1,860	5,241	121,266	2,189	70,971	91	2,391	228	4,544	975	25,692	1,181	27,769	128	3,434	1,141	33,961	815	24,413	120	3
(a) Nevada	6	239	7	240					23	854	1	17			60	1,560	199	7,477	2	54	6	221	47	1,546	41	1,101	11	470	5	150	18	591	16	
(a) Arizona	7	212	14	324					13	377	5	113			32	718	101	2,967	10	282	1	27	59	1,513	106	2,827	10	264	11	322	50	1,429	2	
(a) New Mexico	2	72	6	215					6	225	15	438			20	503	19	715	3	110	3	92	9	320	11	247	38	1,344	7	226	12	435	11	
(a) Washington (State)	25	75	65	1,647			32	906	129	3,502			5	62	19	507	32	846	9	317	47	1,152	126	3,132	28	609			74	2,322	112	2,580	60	2
(a) Canada, Winnipeg & West	2	19							3	43					2	40					1	10	7	103									1	
(a) Mexico			2	66					4	160	1	30			52	1,321	30	1,000	1	40	1	50	13	459	8	218			7	232	10	378	3	
Total (6 months)	256	7,659	889	23,061	42	887	127	3,192	749	21,716	1,067	32,206	77	1,977	5,463	126,908	2,681	87,630	161	4,867	381	8,410	1,775	51,264	1,412	33,780	258	7,554	1,634	53,080	1,139	33,410	421	13
Total (12 months)	512	15,318	1,778	46,122	84	1,774	254	6,384	1,498	43,432	2,134	64,412	154	3,954	10,926	253,996	5,362	175,260	322	9,734	762	16,820	3,550	102,528	2,824	67,560	516	18,108	3,268	106,160	2,278	66,820	842	27
From—																																		
(b) Oregon points on other roads	177	5,116	5,685	170,405			84	2,316	246	7,388	1,176	48,116	99	3,011	87	2,246	496	15,252	103	3,588	173	4,793	797	25,073	262	9,143	3,548	103,260	248	7,451	2,466	74,314	1,136	33
(b) California	62	966	61	1,477			50	450	86	1,553	672	18,850	65	1,299	2,085	68,915	408	7,775	11	109	93	1,676	232	6,135	2,410	38,383	4	99	17	136	45	302	46	
(b) Nevada	11	424							5	130	27	1,379	6	190	10	314	2	70			2	90	9	341	124	5,160	1	40			4	160	1	
(b) Arizona															2	50	1	10							5	63								
(b) New Mexico																									34	448								
(b) Washington (State)	16	324	79	2,358			30	488	38	923	91	2,087	19	373	38	777	83	1,885	3	105	47	1,348	198	4,496	16	553	18	663	29	682	169	3,356	23	
(b) Canada west of Manitoba																	1	31													1	30		
(b) Mexico																																		
(b) Canada, Winnipeg & West																																		
Total (6 months)	266	6,830	5,825	174,240			164	3,254	375	9,994	1,966	70,432	189	4,873	2,222	72,302	986	25,023	117	3,802	315	7,905	1,258	36,067	2,851	53,750	3,571	104,063	294	8,289	2,685	78,172	1,206	34
Total (12 months)	532	13,660	11,650	348,480			328	6,508	750	19,988	3,932	140,864	378	9,746	4,444	144,604	1,972	50,046	234	7,604	630	15,810	2,516	72,134	5,702	107,500	7,142	208,124	588	16,578	5,370	156,344	2,412	69
Grand total (6 months)	522	14,489	6,714	197,301	42	887	291	6,446	1,124	31,710	3,033	102,638	266	6,850	7,685	199,300	3,667	112,653	278	8,669	696	16,315	3,033	87,331	4,263	87,530	3,829	111,616	1,928	61,369	3,824	111,582	1,627	48
Grand total (12 months)	1,044	28,978	13,428	394,602	84	1,774	582	12,892	2,248	63,420	6,066	205,276	532	13,700	15,370	398,600	7,334	225,306	556	17,338	1,392	32,630	6,066	174,662	8,526	175,060	7,658	223,232	3,856	122,738	7,648	223,164	3,254	97

RECAPITULATION

(a) Represents outbound movement; (b) represents inbound movement, or the reverse movement to that indicated in (a)

To—	From—	Carloads	Tons	Avge. tons per car
(a) Other points on Oregon roads	Benton	256	7,659	29.92
(a) California	Clackamas	889	23,061	25.94
(a) Nevada	Clatsop	42	887	21.12
(a) Arizona	Coos	127	3,192	25.13
(a) New Mexico	Douglas	749	21,716	28.99
(a) Washington (State)	Jackson	1,067	32,206	30.18
(a) Canada (west of Manitoba)	Josephine	77	1,977	25.68
(a) Mexico	Klamath	5,463	126,908	23.25
	Lane	2,681	87,630	32.69
	Lincoln	161	4,867	30.23
	Linn	381	8,410	22.07
	Marion	1,775	51,264	28.88
	Multnomah	1,412	33,780	23.92
	Polk	258	7,554	29.28
	Tillamook	1,634	53,080	32.48
	Washington	1,139	33,410	29.33
	Yamhill	421	13,830	32.85
	Total (6 months)	18,532	511,521	27.60
	Total (12 months)	37,064	1,023,042	27.60

From—	To—	Carloads	Tons	Avge. tons per car
(b) Oregon points on other roads	Benton	266	6,830	25
(b) California	Clackamas	5,825	174,240	29
(b) Nevada	Clatsop			
(b) Arizona	Coos	164	3,254	19
(b) New Mexico	Douglas	375	9,994	26
(b) Washington (State)	Jackson	1,966	70,432	35
(b) Canada (west of Manitoba)	Josephine	189	4,873	25
(b) Mexico	Klamath	2,222	72,302	32
(b) Canada (east of Winnipeg)	Lane	986	25,023	25
	Lincoln	117	3,802	32
	Linn	315	7,905	25
	Marion	1,258	36,067	28
	Multnomah	2,851	53,750	18
	Polk	3,571	104,063	29
	Tillamook	294	8,289	28
	Washington	2,685	78,172	29
	Yamhill	1,206	34,738	28
	Total (6 months)	24,290	693,733	28
	Total (12 months)	48,580	1,387,466	28

Statement showing total carloads and total tons of carload freight originating at or destined to points on Southern Pacific Company lines in Oregon

[This is local traffic, embracing intra and inter county tonnage, all being western Oregon counties except Klamath]

PERIOD: JAN., MAR., MAY, JULY, SEPT., AND NOV., 1926, WITH TOTALS FOR THE 12 MONTHS OF 1926

(To) From—	Benton		Clackamas		Coos		Douglas		Jackson		Josephine		Klamath		Lane		Lincoln		Linn		Marion		Multnomah		Polk		Tillamook		Washington		Yamhill	
	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	To
Benton	1,121	31,394			725	22,428	5	107					2	48	97	3,168	63	2,644	583	15,823	201	6,300	70	2,162	263	7,398	2	27	10	248	4	1		
Clackamas	47	1,281	7	157	1	12	6	145	3	90	2	38	6	171	123	5,044	3	96	25	85	73	2,002	249	11,645	12	300	11	369	13	630	33	1,6		
Coos	3	31	1	35	4,674	159,283	57	1,729	14	603					20	474	1	36			1	12	39	1,058	5	139	1	29						
Douglas	2	23	961	46,981	743	29,717	107	3,082	97	3,081	38	1,304	42	1,434	94	3,053	1	60	45	883	15	305	112	2,606	9	110					5	1		
Jackson	10	372	33	432	12	191	60	1,544	205	6,160	63	1,276	30	1,206	31	1,359			15	391	118	5,651	173	6,753	7	184			10	266	16	4		
Josephine					4	56	5	83	40	1,243	13	483	7	192					2	24	3	57	4	57										
Klamath					1	20	4	73	12	254	5	115	13,516	656,849	13	402					4	114	30	908	1	12								
Lane	274	9,654	29	813	484	13,365	163	6,056	77	1,815	20	444	167	5,397	4,186	136,891	14	270	100	3,474	12	213	60	2,033	11	361	13	194	1	19	4	1		
Lincoln	12	266					21	705	10	248	1	18	10	239	14	355	2	50	23	817	8	190	219	7,624	3	104					4	1		
Linn	15	223	16	710	33	504	16	290	3	67	5	72	4	115	59	1,504	20	344	130	4,137	91	3,464	143	5,552	20	660	41	639	3	67	5	1		
Marion	58	1,575	36	1,210	21	417	33	656	49	877	14	273	57	2,405	45	941	4	136	702	24,741	2,614	93,489	795	28,206	75	2,057	5	139	3	281	68	3		
Multnomah	68	1,291	63	2,078	68	943	142	2,548	145	2,614	47	784	85	1,640	191	3,331	17	304	69	1,147	337	5,885	27	751	46	940	60	1,774	182	3,918	130	3		
Polk	45	2,271	283	15,245			1	12	9	195			12	352	15	391	16	848	38	1,464	660	25,261	461	16,007	3,509	99,536	44	869	15	626	174	6		
Tillamook	1	25	373	17,807					1	26			1	24					2	58	34	1,078	267	8,268	4	138	3,209	101,695	28	791	38	1		
Washington	1	11	45	1,531	3	61	1	20	13	184			4	80	9	234					14	357	2,527	73,578	1	30	3,369	100,512	894	28,699	38	1		
Yamhill	5	68	8	229	4	86	5	111	1	23	1	25	10	208	6	147	4	123	8	226	58	2,016	375	10,817	15	439	29	793	16	481	68	1,8		
Total (6 months)	1,662	48,485	1,855	87,222	6,775	227,085	626	17,261	679	17,482	209	4,632	13,933	670,340	5,903	157,304	145	4,971	1,732	53,984	4,465	148,589	5,371	173,260	3,991	113,508	4,606	206,783	1,170	30,814	543	15		
Total (12 months)	3,324	96,976	3,710	174,444	13,550	454,170	1,252	34,522	1,358	34,964	418	9,664	27,906	1,340,680	9,806	314,608	290	9,942	3,464	107,928	8,928	296,738	10,762	346,598	7,982	227,012	13,612	415,1						

10	372	33	432	12	191	60	1,644	205	6,160	63	1,276	30	1,208	31	1,359			15	301	118	5,621	175	6,753	7	184			30			
				4	56	5	83	40	1,243	13	483	7	192					2	24	3	57	4	52								
				1	20	4	73	12	254	5	115	13,516	656,849	13	402					4	114	30	908	1	12						
274	9,684	29	813	484	13,365	163	6,056	77	1,815	20	444	167	5,297	4,186	136,891	14	270	100	3,474	13	213	69	2,033	11	361	15	184	1	12	4	155
12	266					21	705	10	248	1	18	10	230	14	365	2	50	23	817	8	196	219	7,624	8	204					4	121
15	223	16	710	35	504	16	290	3	67	5	72	4	115	59	1,504	20	344	120	4,137	91	2,464	142	3,852	20	680	41	639	3	57	5	76
58	1,575	36	1,210	21	417	33	656	49	877	14	273	57	2,405	45	941	4	136	702	24,741	2,814	95,459	795	25,395	75	3,057	5	139	8	231	93	3,705
68	1,991	63	2,078	68	943	142	2,548	145	2,614	47	784	85	1,640	191	3,331	17	364	69	1,147	337	5,885	27	751	48	940	60	1,774	182	3,916	120	3,253
45	2,271	283	15,245			1	12	9	195			12	352	15	391	16	948	28	1,404	689	26,261	461	16,307	3,509	99,536	44	599	15	425	174	6,382
1	25	373	17,807					1	28			1	24					2	56	34	1,078	267	8,358	4	136	3,269	101,685	26	791	25	777
1	11	45	1,531	3	61	1	20	13	184			4	80	9	234					14	357	2,337	73,878	1	30	3,249	100,512	696	23,880	23	707
5	68	8	223	4	86	5	111	1	23	1	25	10	298	6	147	4	123	8	230	58	2,016	375	16,817	18	429	59	795	16	421	35	1,324
662	48,485	1,855	87,222	6,775	227,085	626	17,261	679	17,482	209	4,832	13,953	670,340	4,903	157,304	145	4,971	1,732	53,964	4,463	148,369	5,371	173,299	3,991	113,506	6,806	206,783	1,170	30,814	543	18,187
324	96,970	3,710	174,444	13,550	454,170	1,252	34,522	1,358	34,964	418	9,664	27,906	1,340,680	9,806	314,608	290	9,942	3,464	107,928	8,926	296,738	10,742	346,598	7,982	227,012	13,612	413,566	2,340	61,628	1,086	36,374

RECAPITULATION

Counties	Cars	Tons	Avge. tons per car
Benton	1,662	48,485	29.17
Clackamas	1,855	87,222	47.02
Coos	6,775	227,085	33.52
Douglas	626	17,261	27.57
Jackson	679	17,482	40.47
Josephine	209	4,832	23.12
Klamath	13,953	670,340	33.49
Lane	4,903	157,304	32.08
Lincoln	145	4,971	34.28
Linn	1,732	53,964	31.16
Marion	4,463	148,369	33.24
Multnomah	5,371	173,299	32.27
Polk	3,991	113,506	28.44
Tillamook	6,806	206,783	30.38
Washington	1,170	30,814	26.34
Yamhill	543	18,187	33.49
Total (6 months)	54,883	1,979,874	[1] 36.07
Total (12 months)	109,766	3,959,748	[1] 36.07

[1] Tons per car.

Jackson	10	372	33	432	12	191	60	1,644	205	6,160	63	1,276	30	1,206	31	1,359			15	391	118	5,651	17
Josephine					4	56	5	83	40	1,243	13	483	7	192					2	24	3	57	
Klamath					1	20	4	73	12	254	5	115	13,516	636,849	13	402					4	114	8
Lane	274	9,654	29	813	484	13,365	163	6,056	77	1,815	20	444	167	5,297	4,186	138,891	14	270	100	3,474	13	213	6
Lincoln	12	266					21	705	10	248	1	18	10	239	14	365	2	50	23	817	8	195	2
Linn	15	223	16	710	35	504	16	290	3	67	5	72	4	115	59	1,504	30	344	120	4,137	91	2,464	10
Marion	58	1,575	36	1,210	21	417	33	656	49	877	14	273	57	2,405	45	941	4	136	702	24,741	2,814	93,459	7
Multnomah	68	1,291	63	2,078	68	943	142	2,548	145	2,614	47	784	85	1,640	191	3,331	17	364	69	1,147	327	5,883	
Polk	45	2,271	283	15,245			1	12	9	195			12	352	15	391	16	848	28	1,404	689	26,261	4
Tillamook	1	25	373	17,807					1	28			1	24					2	56	34	1,078	2
Washington	1	11	45	1,531	3	61	1	20	13	184			4	80	9	234					14	357	2,
Yamhill	5	68	8	223	4	86	5	111	1	23	1	25	10	298	6	147	4	123	5	236	38	2,016	9
Total (6 months)	1,662	48,485	1,855	87,222	6,775	227,085	626	17,261	679	17,482	209	4,832	13,953	670,340	4,903	157,304	145	4,971	1,732	53,964	4,463	148,369	5,37
Total (12 months)	3,324	96,970	3,710	174,444	13,550	454,170	1,252	34,522	1,358	34,964	418	9,664	27,906	1,340,680	9,806	314,608	290	9,942	3,464	107,928	8,926	296,738	10,74

RECAPITULATION

Counties	Cars	Tons	Avge. tons per car
Benton	1,662	48,485	29.17
Clackamas	1,855	87,222	47.02
Coos	6,775	227,085	33.52
Douglas	626	17,261	27.57
Jackson	679	17,482	40.47
Josephine	209	4,832	23.12
Klamath	13,953	670,340	33.49
Lane	4,903	157,304	32.08
Lincoln	145	4,971	34.28
Linn	1,732	53,964	31.16
Marion	4,463	148,369	33.24
Multnomah	5,371	173,299	32.27
Polk	3,991	113,506	28.44
Tillamook	6,806	206,753	30.38
Washington	1,170	30,814	26.34
Yamhill	543	18,187	33.49
Total (6 months)	54,883	1,979,874	[1] 36.07
Total (12 months)	109,766	3,959,748	[1] 36.07

[1] Tons per car.

Statement showing total carloads and total tons from Oregon points on other roads to S. P. lines for the months of Jan., March, May, July, Sept., and Nov., 1926

modity	Cars	Tons	Class No.	Commodity	Cars	Tons	Class No.	Commodity	Cars	Tons	Class No.	Commodity	Cars	To
	12	373	18	Cattle and calves	107	1,264	42	Pulpwood	25	930	58	Agr. imps. & vehicles except autos	15	
	5	140	19	Sheep and goats	7	99	43	Lumber, etc	404	12,471	59	Autos and auto. trucks	2	
	2	62	20	Hogs	19	237	45	Refined petroleum and its products	1,788	57,919	60	H. H. goods and 2nd hand furniture	9	
	5	144	21	Fresh meats	1	15	47	Sugar, sirup, glucose and molasses	3	75	64	Fertilizers (all kinds)	102	
	44	1,210	22	Other P. H. P	40	569	48	Boats and vessel supplies	1	15	66	Paper, printed matter, and books	3	
	321	8,729	28	Other animals and products	12	243	49	Iron, pig and bloom	4	187	68	Canned goods	2	
	116	1,863	30	Bituminous coal	8	249	50	Rails and fastenings	7	283	69	Other manufactures and misc	166	
	1	32	31	Coke	6	195	51	Bar & sheet iron, struct. iron, etc	164	2,728				
	47	1,254	35	Clay, gravel, sand, and stone	949	47,543	53	Castings, machinery, and boilers	11	204		Total (6 months)	16,783	51
	4	77	36	Crude petroleum	633	24,155	54	Cement	75	2,921		Total (12 months)	33,566	1,02
ables	1	25	39	Other products of mines	1	50	55	Brick and artificial stone	27	812				
culture	5	109	40	Logs, posts, poles, and cordwood	11,591	338,984	56	Lime and plaster	3	60				
	20	237	41	Ties	3	108	57	Sewer pipe and drain tile	2	40				

Statement showing total carloads and total tons—all commodities—from S. P. lines to Oregon points on other roads for the months of Jan., March, May, July, Sept., and Nov., 1926

modity	Cars	Tons	Class No.	Commodity	Cars	Tons	Class No.	Commodity	Cars	Tons	Class No.	Commodity	Cars	To
	110	4,111	19	Sheep and goats	121	1,561	43	Lumber, etc	1,040	37,258	59	Autos. & auto. trucks	1	
	86	2,496	20	Hogs	30	292	44	Other products of forests	1	48	60	H. H. Gds. & 2nd hand furniture	64	
	26	888	22	Other P. H. P	1	27	45	Refined petroleum & its products	2	45	62	Beverages	1	
	6	180	26	Wood	3	63	50	Rails and fastenings	6	221	64	Fertilizers (all kinds)	6	
	4	112	28	Other animals and products	2	35	51	Bar & sheet iron, struct. iron, etc	27	689	65	Paper, printed matter, and books	2	
	61	823	30	Bituminous coal	2	150	53	Castings, machinery and boilers	14	324	68	Canned goods	79	
	6	124	35	Clay, gravel, sand, and stone	1	49	54	Cement	188	9,487	69	Other manufactures and misc	29	
ables	27	702	36	Crude petroleum	5	197	55	Brick and artificial stone	38	1,463				
culture	2	36	40	Logs, posts, poles, and cordwood	83	2,928	56	Lime and plaster	1	33		Total (6 months)	2,439	8
	3	33	41	Ties	14	524	57	Sewer pipe and drain tile	11	219		Total (12 months)	4,878	16
	97	1,145	42	Pulpwood	227	10,060	58	Agr. imps. & vehicles except autos	11	297				

nation of through transcontinental traffic of miscellaneous short-line carriers connecting with Southern Pacific Company in Oregon, routed via the Portland, Ogden, and other junctions gateways for the months of J Mar., May, July, Sept., and Nov., 1926, with totals for the 12 months of 1926

Name of connecting carrier	Commodity & number	Eastbound via—						Westbound
		Portland		Ogden		Other jcts.		
		Cars	Tons	Cars	Tons	Cars	Tons	
R. Co	43 Lbr., etc			38	888	3	73	
	41 Ties			1	50			
R. R. Co	43 Lbr., etc	7	285	11	405			
R. R	43 Lbr., etc			6	165			
	43 Lbr., etc			245	5,994	16	362	
Co	40 Logs, etc			2	66			
	41 Ties	7	287	2	84			
	43 Lbr., etc	2	78	18	637	1	30	
	65 Paper, etc					3	75	
	41 Ties			17	855			
	43 Lbr., etc			68	2,037	6	151	
	43 Lbr., etc			1	29			
	16 Other prods. of agr			4	39			
	41 Ties	3	109	1	25			
	43 Lbr., etc	335	11,141	784	24,211	15	495	
	68 Cd. gds	1	33			1	30	
	69 Other mfg. & misc			1	27			
R. R	41 Ties	3	132	10	431			
	43 Lbr., etc	3	108					
Ry. Co	43 Lbr., etc			5	187	1	33	
Ry	43 Lbr., etc	1	30					
		361		1,215		46		
		722	12,173	2,430	86,160	92	1,279	
nths)			24,346		72,320		2,558	
nths)								

	Cars	Tons
Grand total (all traffic) (6 mos.)	1,622	49,612
Grand total (all traffic) (12 mos.)	3,244	99,224

Statement showing distribution of through transcontinental traffic of miscellaneous short line carriers connecting with Southern Pacific Company in Oregon routed via the Portland, Ogden, and other junctions gateways for the months of Jan., Mar., May, July, Sept., and Nov., 1926, with totals for the 12 months of 1926

Destination, State or county	Eastbound via—			Westbound [1]
	Portland	Ogden	Other jcts.	

Statement showing total carloads and total tons from Oregon points on other roads to S. P. lines for the months of Jan., March, May, July, Sept.,

Class No.	Commodity	Cars	Tons	Class No.	Commodity	Cars	Tons	Class No.	Commodity	Cars	Tons	Class No.
1	Wheat	12	373	18	Cattle and calves	107	1,264	42	Pulpwood	25	930	58
2	Corn	5	140	19	Sheep and goats	7	99	43	Lumber, etc	404	12,471	59
3	Oats	2	62	20	Hogs	19	237	45	Refined petroleum and its products	1,788	57,919	60
4	Other grain	5	144	21	Fresh meats	1	15	47	Sugar, sirup, glucose and molasses	3	75	64
5	Flour and meal	44	1,210	22	Other P. H. P	40	569	48	Boats and vessel supplies	1	15	66
6	Other mill products	321	8,729	28	Other animals and products	12	243	49	Iron, pig and bloom	4	187	68
7	Hay, straw, and alfalfa	116	1,863	30	Bituminous coal	8	249	50	Rails and fastenings	7	283	69
10	Cotton seed, etc	1	32	31	Coke	6	196	51	Bar & sheet iron, struct. iron, etc	164	2,728	
12	Other fresh fruits	47	1,254	35	Clay, gravel, sand, and stone	949	47,543	53	Castings, machinery, and boilers	11	204	
13	Potatoes	4	77	36	Crude petroleum	633	24,155	54	Cement	75	2,921	
15	Dried fruits and vegetables	1	25	39	Other products of mines	1	50	55	Brick and artificial stone	27	812	
16	Other products of agriculture	5	109	40	Logs, posts, poles, and cordwood	11,591	338,984	56	Lime and plaster	3	60	
17	Horses and mules	20	237	41	Ties	3	108	57	Sewer pipe and drain tile	2	40	

Statement showing total carloads and total tons—all commodities—from S. P. lines to Oregon points on other roads for the months of Jan., March, May, Ju

Class No.	Commodity	Cars	Tons	Class No.	Commodity	Cars	Tons	Class No.	Commodity	Cars	Tons	Class No.
1	Wheat	110	4,111	19	Sheep and goats	121	1,581	43	Lumber, etc	1,040	37,258	59
3	Oats	86	2,496	20	Hogs	30	292	44	Other products of forests	1	48	60
4	Other grain	26	888	22	Other P. H. P	1	27	45	Refined petroleum & its products	2	45	62
5	Flour and meal	6	180	26	Wood	3	63	50	Rails and fastenings	6	221	64
6	Other mill products	4	112	28	Other animals and products	2	35	51	Bar & sheet iron, struct. iron, etc	27	689	65
7	Hay, straw and alfalfa	61	823	30	Bituminous coal	2	150	53	Castings, machinery and boilers	14	324	66
12	Other fresh fruits	6	124	35	Clay, gravel, sand, and stone	1	49	54	Cement	188	9,487	67
15	Dried fruits and vegetables	27	702	36	Crude petroleum	5	197	55	Brick and artificial stone	38	1,463	
16	Other products of agriculture	2	36	40	Logs, posts, poles, and cordwood	83	2,928	56	Lime and plaster	1	33	
17	Horses and mules	3	33	41	Ties	14	524	57	Sewer pipe and drain tile	11	219	
18	Cattle and calves	97	1,145	42	Pulpwood	227	10,060	58	Agr. imps. & vehicles except autos	11	297	

Statement showing origination of through transcontinental traffic of miscellaneous short-line carriers connecting with Southern Pacific Company in Oregon, routed via the Portland, Ogden, Mar., May, July, Sept., and Nov., 1926, with totals for the 12 months of 1926

Name of connecting carrier	Commodity & number	Portland	
		Cars	To
California & Oregon Coast R. R. Co.	43 Lbr., etc		
Carlton & Coast Railway	41 Ties		
	43 Lbr., etc	7	
Gales Creek & Wilson River R. R. Co.	43 Lbr., etc		
Oregon, California & Eastern R. R.	43 Lbr., etc		
Oregon Pacific & Eastern Ry. Co.	40 Logs, etc		
	41 Ties	7	
	43 Lbr., etc	2	
Water Carriers at Portland	65 Paper, etc		
Portland Electric Power Co	41 Ties		
	43 Lbr., etc		
United Railways	43 Lbr., etc		
Valley & Siletz R. R.	16 Other prods. of agr		
	41 Ties	3	
	43 Lbr., etc	335	
	68 Cd. gds	1	
	69 Other mfg. & misc		
Willamette Valley & Coast R. R.	41 Ties	3	
	43 Lbr., etc	3	
Willamette Valley Southern Ry. Co.	43 Lbr., etc		
Willamina & Grande Ronde Ry.	43 Lbr., etc	1	
Total cars (6 months)		361	
Total tons (6 months)			
Grand total cars (12 months)		722	
Grand total tons (12 months)			

[1] None reported.

	Cars	Tons
Grand total (all traffic) (6 mos.)	1,622	49,612
Grand total (all traffic) (12 mos.)	3,244	99,224

Statement showing distribution of through transcontinental traffic of miscellaneous short line carriers connecting with Southern Pacific Company in Oregon routed via the Portland, Ogden, and other junctions gateways for the months of Jan., Mar., May, July, Sept., and Nov., 1926, with totals for the 12 months of 1926

Destination, State or county	Eastbound via—			Westbound [1]
	Portland	Ogden	Other jcts.	

of Jan., Mar., May, July, Sept., and Nov., 1926, with totals for the 12 months of 1926

Destination, State or county	Eastbound via—						Westbound [1]
	Portland		Ogden		Other jcts.		
	Cars	Tons	Cars	Tons	Cars	Tons	
Arkansas					1	17	
Colorado	11	393	33	1,408			
Connecticut			4	98			
Idaho	3	122					
Illinois	14	517	235	6,854			
Indiana			44	1,305			
Iowa	6	192	73	2,525			
Kansas	7	237	121	3,996			
Louisiana					2	53	
Maryland			1	31			
Massachusetts			4	99			
Michigan	17	597	35	987			
Minnesota	77	2,531	12	359			
Missouri	4	168	65	2,020			
Montana	4	146					
Nebraska	22	725	61	1,905			
New Hampshire			2	40			
New Jersey			1	23			
New Mexico	19	626					
New York	3	99	67	1,794	4	92	
North Carolina			1	19			
North Dakota	4	161					
Ohio			50	1,395	3	76	
Oklahoma	9	294	66	2,068	2	57	
Pennsylvania			18	517			
South Dakota	69	2,205					
Tennessee			1	20			
Texas	44	1,483	8	225	32	939	
Utah	12	478	63	2,504			
Virginia			2	55			
West Virginia			1	23			
Wisconsin	13	410	241	6,001	2	45	
Wyoming	23	789	4	131			
Canada East of Winnipeg			2	58			
Total (6 months)	361	12,173	1,215	36,160	46	1,279	
Total (12 months)	722	24,346	2,430	72,320	92	2,558	

[1] None reported.

(See p. 1657.) No. 19

FOLD-OUT IS TOO LARGE TO BE FILMED

All commodities—Trans-continental—by commodity groups—Statement showing total carloads and total tons of all carload commodities (by commodity groups) moving between points on the Southern Pacific Company's lines in Oregon and the various States and countries shown herein, via the Portland, Ogden, and other junctions gateways, for the months of Jan., Mar., May, July, Sept., and Nov., 1926, with grand totals for the 12 months of 1926—Continued

[NOTE.—Numbers 1 to 16 include products of agriculture; 17 to 28 include animals and products; 29 to 39 include products of mines ;40 to 44 include products of forests; 45 to 69 include manufactures and miscellaneous]

2534

County, commodity, groups and numbers	Canada, east of Winnipeg												West Indies, Central and South America via Gulf ports						"Export" via Gulf ports											
	Eastbound						Westbound						Westbound						Eastbound						Westbound					
	Portland		Ogden		Other jcts.		Portland		Ogden		Other jcts.		Portland		Ogden		Other jcts.		Portland		Ogden		Other jcts.		Portland		Ogden		Other jcts.	
	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons
Benton 1-16 Agri.																														
17-28 Lv. stk.																														
29-39 Mines																														
40-44 Forests																														
45-69 Misc.																														
Total																														
Clackamas 1-16 Agri.																														
17-28 Lv. stk.																														
29-39 Mines																														
40-44 Forests																														
45-69 Misc.																														
Total																														
Coos 1-16 Agri.													1	10			1	11												
17-28 Lv. stk.																														
29-39 Mines																														
40-44 Forests	1	41	5	139																										
45-69 Misc.			8	206																										
Total	1	41	13	345									1	10			1	11												
Douglas 1-16 Agri.	6	109	3	97																										
17-28 Lv. stk.																														
29-39 Mines																														
40-44 Forests			1	30																										
45-69 Misc.																														
Total	6	109	4	127																										
Jackson 1-16 Agri.			6	98	2	27											15	158												
17-28 Lv. stk.																														
29-39 Mines																														
40-44 Forests			1	25																										
45-69 Misc.																														
Total			7	123	2	27											15	158												
Josephine 1-16 Agri.																														
17-28 Lv. stk.																														
29-39 Mines																														
40-44 Forests			2	80																										
45-69 Misc.																														
Total			2	80																										
Klamath 1-16 Agri.																														
17-28 Lv. stk.																														
29-39 Mines																														
40-44 Forests			9	212																										
45-69 Misc.																														
Total			9	212																										
Lane 1-16 Agri.													15	158			14	147												
17-28 Lv. stk.																														
29-39 Mines																														
40-44 Forests																														
45-69 Misc.																														
Total													15	158			14	147												
2535 **Lincoln** 1-16 Agri.																														
17-28 Lv. stk.																														
29-39 Mines																														
40-44 Forests	3	120	2	47																										
45-69 Misc.																														
Total	3	120	2	47																										
Linn 1-16 Agri.	1	32	3	115									1	10																
17-28 Lv. stk.																														
29-39 Mines																														
40-44 Forests																														
45-69 Misc.																														
Total	1	32	3	115									1	10																
Marion 1-16 Agri.													11	115			9	70												
17-28 Lv. stk.																														
29-39 Mines																														
40-44 Forests			1	16																										
45-69 Misc.							1	15																						
Total			1	16			1	15					11	115			9	70												
Multnomah 1-16 Agri.			1	8													78	840												
17-28 Lv. stk.																														
29-39 Mines																														
40-44 Forests																														
45-69 Misc.	1	24																												
Total	1	24	1	8													78	840												

| | | |

odities—*Trans-continental—By commodity groups—Statement showing total carloads and total tons of all carload commodities (by commodity groups) moving between points on the Southern Pacific Company's lines in the various States and countries shown herein, via the Portland, Ogden, and other junctions gateways, for the months of Jan., Mar., May, July, Sept., and Nov., 1926, with grand totals for the 12 months of 1926*—Conti

[NOTE.—Numbers 1 to 16 include products of agriculture; 17 to 28 include animals and products; 29 to 39 include products of mines; 40 to 44 include products of forests; 45 to 69 include manufactures and miscellaneous]

odity groups, and mbers	Wyoming												Mexico—Gulf Coast										Europe, via Atlantic Coast									
	Eastbound						Westbound						Eastbound						Westbound				Eastbound						Westbound			
	Portland		Ogden		Other jcts.		Portland		Ogden		Other jcts.		Portland		Ogden		Other jcts.		Portland		Ogden		Other jcts.		Portland		Ogden		Other jcts.		Portland		Ogden	
	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons
1-16 Agri.																																
17-28 Lv. stk.																																
29-39 Mines.																																
40-44 Forests.	10	390	5	199													3	104							4	51						
45-69 Misc.																																
Total	10	390	5	199													3	104							4	51						
1-16 Agri.	3	36																														
17-28 Lv. stk.																																
29-39 Mines.																																
40-44 Forests.	2	80	2	70			1	36									1	20							2	20						
45-69 Misc.	1	32															1	26														
Total	6	148	2	70			1	36									2	46							2	20						
1-16 Agri.																																
17-28 Lv. stk.																																
29-39 Mines.																																
40-44 Forests.	43	1,345					5	246																								
45-69 Misc.																																
Total	43	1,345					5	246																								
1-16 Agri.																																
17-28 Lv. stk.																																
29-39 Mines.																																
40-44 Forests.	7	226	3	86			4	166																	1	30						
45-69 Misc.																																
Total	7	226	3	86			4	166																	1	30						
1-16 Agri.			3	40																												
17-28 Lv. stk.																																
29-39 Mines.																																
40-44 Forests.							4	153																								
45-69 Misc.																																
Total			3	40			4	153																	24	440						
1-16 Agri.	5	50																							24	440						
17-28 Lv. stk.																																
29-39 Mines.																																
40-44 Forests.																									1	18						
45-69 Misc.																																
Total	5	50																														
1-16 Agri.																									1	18						
17-28 Lv. stk.																																
29-39 Mines.																																
40-44 Forests.									3	105																						
45-69 Misc.																																
Total									3	105																						
1-16 Agri.																																
17-28 Lv. stk.																																
29-39 Mines.																																
40-44 Forests.	42	1,523	29	942			1	33																	1	13						
45-69 Misc.															2	65	22	673														
Total	42	1,523	29	942			1	33							2	65	22	673							1	13						
1-16 Agri.																																
17-28 Lv. stk.																																
29-39 Mines.																																
40-44 Forests.	4	152	1	30			1	45																	1	13						
45-60 Misc.																	1	28														
Total	4	152	1	30			1	45									1	28														
1-16 Agri.																																
17-28 Lv. stk.																																
29-39 Mines.																									1	27	1	43				

All commodities—Trans-continental—By commodity groups—Statement showing total carloads and total tons of all carload commodities (by commodity groups) moving between the various States and countries shown herein, via the Portland, Ogden, and other junctions gateways, for the months of Jan., Mar., May, July, Sept., and Nov., 192

[NOTE.—Numbers 1 to 16 include products of agriculture; 17 to 28 include animals and products; 29 to 39 include products of mines; 40 to 44 include products of forests; 45 to 60 inc

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County, commodity groups, and numbers	Wyoming												Mexico—Gulf Coast											
	Eastbound						Westbound						Eastbound						Westbound					
	Portland		Ogden		Other jcts.		Portland		Ogden		Other jcts.		Portland		Ogden		Other jcts.		Portland		Ogden		Other jcts.		Portland	
	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Ton
Benton																										
1-16 Agri.																										
17-28 Lv. stk.																										
29-39 Mines																										
40-44 Forests	10	390	5	199																						
45-69 Misc.																	3	104								
Total	10	390	5	199													3	104								
Clackamas																										
1-16 Agri.	3	36																								
17-28 Lv. stk.																										
29-39 Mines																										
40-44 Forests	2	80	2	70			1	36																		
45-69 Misc.		32															1	20								
																	1	26								
Total	6	148	2	70			1	36									2	46								
Coos																										
1-16 Agri.																										
17-28 Lv. stk.																										
29-39 Mines																										
40-44 Forests	43	1,345					5	246																		
45-69 Misc.																										
Total	43	1,345					5	246																		
Douglas																										
1-16 Agri.																										
17-28 Lv. stk.																										
29-39 Mines																										
40-44 Forests	7	226	3	86			4	166																		
45-69 Misc.																										
Total	7	226	3	86			4	166																		
Jackson																										
1-16 Agri.			3	40																						
17-28 Lv. stk.																										
29-39 Mines							4	153																		
40-44 Forests																										
45-69 Misc.																										
Total			3	40			4	153																		
Josephine																										
1-16 Agri.	5	50																								
17-28 Lv. stk.																										
29-39 Mines																										
40-44 Forests																										
45-69 Misc.																										
Total	5	50																								
Klamath																										
1-16 Agri.																										
17-28 Lv. stk.																										
29-39 Mines																										
40-44 Forests									3	105																
45-69 Misc.																										
Total									3	105																
Lane																										
1-16 Agri.																										
17-28 Lv. stk.																										
29-39 Mines																										
40-44 Forests	42	1,523	29	942			1	33							2	65	22	673								
45-69 Misc.																										
Total	42	1,523	29	942			1	33							2	65	22	673								
2533 **Lincoln**																										
1-16 Agri.																										
17-28 Lv. stk.																										
29-39 Mines																										
40-44 Forests	4	152	1	30			1	45																		
45-60 Misc.																	1	28								
Total	4	152	1	30			1	45									1	28								
Linn																										
1-16 Agri.																										

Marion	1-16 Agri.	2	23																							1	37	1	43				
	17-28 Lv. stk.																	1	8														
	29-39 Mines																									13	144	16	179	1	10		
	40-44 Forests	6	247	7	274			4	200																								
	45-69 Misc.	1	34															1	28														
	Total	9	304	7	274			4	200									2	36							13	144	16	179	1	10		
Multnomah	1-16 Agri.																																
	17-28 Lv. stk.																											6	55				
	29-39 Mines																																
	40-44 Forests																																
	45-69 Misc.	1	15															1	26														
	Total	1	15															1	26									6	55				
Polk	1-16 Agri.																																
	17-28 Lv. stk.																									10	166	17	177				
	29-39 Mines																																
	40-44 Forests	4	160					1	52																								
	45-69 Misc.							1	10									1	8														
	Total	4	160					2	62									1	8							10	166	17	177				
Tillamook	1-16 Agri.																																
	17-28 Lv. stk.																																
	29-39 Mines																																
	40-44 Forests	3	115	3	105			2	92																								
	45-69 Misc.																																
	Total	3	115	3	105			2	92																								
Washington	1-16 Agri.																																
	17-28 Lv. stk.																																
	29-39 Mines																																
	40-44 Forests	16	531	11	407			2	83																								
	45-69 Misc.																	2	56														
	Total	16	531	11	407			2	83									2	56														
Yamhill	1-16 Agri.																																
	17-28 Lv. stk.																																
	29-39 Mines																																
	40-44 Forests	11	414	2	80			1	45																			1	10				
	45-69 Misc.																																
	Total	11	414	2	80			1	45																			1	10				
Total	1-16 Agri.	10	109	3	40																												
	17-28 Lv. stk.																	1	8							24	347	50	596	1	10		
	29-39 Mines																																
	40-44 Forests	156	5,477	63	2,193			26	1,151	3	105																						
	45-69 Misc.	3	81					1	10					2	65	33	1,004											24	440				
																2	34																
Grand total (6 months)		169	5,667	66	2,233			27	1,161	3	105			2	65	36	1,046									24	347	74	1,036	1	10		
Grand total (12 months)		338	11,334	132	4,466			54	2,322	6	210			4	130	72	2,092									48	694	148	2,072	2	20		

All commodities—Trans-continental—By commodity groups—Station
various States and countries shown herein, via the Portl

[NOTE.—Numbers 1 to 16 include produc

2526

South Car

County, commodity groups, and numbers		Eastbound						
		Portland		Ogden		Other jcts.		Ot
		Cars	Tons	Cars	Tons	Cars	Tons	C Cars
Benton	1–16 Agri.							
	17–28 Lv. stk.							
	29–39 Mines							
	40–44 Forests							
	45–69 Misc.							
	Total							

THE NEXT EIGHT PAGES OF FOLDOUTS ARE TOO LARGE TO BE FILMED

Exhibit No. 26—Witness Hal F. Wiggins

Before the Interstate Commerce Commission

OREGON TRAFFIC—CARS, TONNAGES AND COMMODITIES MOVING BETWEEN OREGON AND STATES, TERRITORIES, AND COUNTRIES NAMED, VIA GATEWAYS SHOWN HEREIN—

TRANS-CONTINENTAL GROUP TERRITORY

	Pages		Pages		Pages		Pages		Pages		Pages		Pages		Pages		Pages
Alabama	1–2	Florida	5–6	Kansas	9–10	Michigan	12–13	New Hampshire	16–17	Oklahoma	20–21	Texas	24–25	Wyoming	28–29	Europe via Gulf ports	"
Arkansas	"	Georgia	"	Kentucky	"	Minnesota	"	New Jersey	"	Pennsylvania	"	Utah	"	Mexico—Gulf coast	"	"Export" via Gulf ports	"
Colorado	"	Idaho	"	Louisiana	"	Mississippi	"	New York	"	Rhode Island	"	Vermont	"	Europe, via Atlantic coast	"	Summaries and passages	"
Connecticut	3–4	Illinois	7–8	Maine	10–11	Missouri	14–15	North Carolina	18–19	South Carolina	22–23	Virginia	26–27	Canada, east of Winnipeg	30–31		
Delaware	"	Indiana	"	Maryland	"	Montana	"	North Dakota	"	South Dakota	"	West Virginia	"	West Indies, Central and South America, via Gulf ports	"		
District of Columbia	"	Iowa	"	Massachusetts	"	Nebraska	"	Ohio	"	Tennessee	"	Wisconsin	"				

INTERMEDIATE GROUP TERRITORY

	Page		Page		Page		Page		Page		Page		Page		Page
Arizona	37	California	37	Canada, Winnipeg, and west	37	Mexico	37	Nevada	37	New Mexico	37	Oregon points on other roads	37	Washington	37

PASSING OR "BRIDGE" TRAFFIC (pages 39-41) (MISCELLANEOUS ORIGINS AND DESTINATIONS)

LOCAL GROUP TERRITORY (INTRA AND INTER COUNTY IN OREGON)

	Page		Page		Page		Page		Page		Page		Page		Page
Benton	38	Coos	38	Jackson	38	Klamath	38	Lincoln	38	Marion	38	Polk	38	Washington	38
Clackamas	38	Douglas	38	Josephine	38	Lane	38	Linn	38	Multnomah	38	Tillamook	38	Yamhill	38

MISCELLANEOUS TOTALS AND SUMMARIES (PAGES 41-70)

Exhibit of Public Service Commission of Oregon—Traffic movement commodity percentages

By Hal F. Wiggins, consulting rate and traffic expert

OREGON TRAFFIC—CARS, TONNAGES AND

	Pages		Pages		Pages
Alabama	1–2	Florida	5–6	Kansas	31-3
Arkansas	"	Georgia	"	Kentucky	"
Colorado	"	Idaho	"	Louisiana	
Connecticut	3–4	Illinois	7–8	Maine	33-3
Delaware	"	Indiana	"	Maryland	
District of Columbia	"	Iowa	"	Massachusetts	

	Page		Page		Page
Arizona	37	California	37	Canad	

	Page		Page		Page
Benton	38	Coos	38	Jackso	
Clackamas	38	Douglas	38	Joseph	

E

2502

Exhibit 25—Gilkey

Linn County

	Tons	Cars
Estimate of present agricultural tonnage available for movement over proposed cross-State railroad:		
Clover seed	73	5
Ryegrass	280	18
Apples	68	4
Pears	61	4
Dried prunes	694	25
Cherries	200	20
Strawberries	1,750	87
Walnuts	15	1
Canned fruits & vegetables	1,680	60
Feed grains & prepared feeds	2,500	100
Eggs	334	25
Total present tonnage available	7,655	349
Potential agricultural tonnage:		
Eggs	334	25
Pears	61	4
Dried prunes	103	4
Walnuts	15	1
Canned fruits & vegetables	840	30
Feed	500	20
Total potential tonnage	1,853	84
Summary:		
Present tonnage	7,655	349
Additional available within five years	1,853	84
Total within five years	9,508	433
Estimate of present lumber tonnage available:		
Cars moved from Albany & Mill City	345,600	8,640
Additional available within five years	345,600	8,640
Total within five years	691,200	17,280
Lumber shipments east from Toledo by rail in 1927	123,042	3,076

Timber resources of the county, thirty billion feet of marketable timber.

2542 *Southern Pacific Company—Grand total northbound and southbound "bridge" traffic—statement of carloads passing through Oregon originating at and destined to points outside this State, period Jan., March, May, July, Sept., Dec., 1926*

[Northbound and southbound commodity (total)] Page 39

Name of State or country	California		New Mexico		Idaho, via Ogden		Utah, Wyoming, Colorado, via Ogden		Texas, Louisiana				Other eastern States				Total	
									Via Ogden		Via El Paso		Via Ogden		Via El Paso			
	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound
Washington	3,912	2,492	71	131	.....	.....	18	2	.....	4	219	85	8	13	6	45	4,234	2,772
Idaho	362	406	.....	11	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	367	417
Montana	227	204	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	229	208
North and South Dakota	34	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	34	16
Minnesota	37	46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37	46
Wisconsin	1	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	14
Other eastern States	4	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	6
Canada	659	57	8	.....	.....	.....	.....	.....	.....	.....	31	.....	.....	.....	.....	.....	698	57
Total (6 mos.)	5,236	3,241	81	144	.....	.....	18	2	.....	4	255	85	8	13	6	45	5,604	3,334
Total (12 mos.)	10,472	6,482	162	288	.....	.....	36	4	.....	8	510	170	16	26	12	90	11,208	7,068

Total (6 mos.), northbound	5,604	61.32%
Total (6 mos.), southbound	3,534	38.67%
Total (6 mos.), (northbound and southbound)	9,138	100.00%
Total (12 mos.), (northbound and southbound)	18,276	.....

2543 *Southern Pacific Company—Southbound—Statement of carloads passing through Oregon, originating at and destined to points outside this State, period Jan., March, May, July, Sept., Dec., 1926*

[Commodity (total)] Page 40

From—	To—								
	California	Nevada, Arizona, New Mexico, Mexico	Idaho, via Ogden	Utah, Wyoming, Colorado, via Ogden	Texas, Louisiana		Other eastern States		Total
					Via Ogden	Via El Paso	Via Ogden	Via El Paso	
Washington	2,492	131	.....	2	4	85	13	45	2,772
Idaho	406	11	.....	.....	.....	.....	.....	.....	417
Montana	204	2	.....	.....	.....	.....	.....	.....	208
North and South Dakota	16	.....	.....	.....	.....	.....	.....	.....	16
Minnesota	46	.....	.....	.....	.....	.....	.....	.....	46
Wisconsin	14	.....	.....	.....	.....	.....	.....	.....	14
Other eastern States	6	.....	.....	.....	.....	.....	.....	.....	6
Canada	57	.....	.....	.....	.....	.....	.....	.....	57
Total (6 mos.)	3,241	144	.....	2	4	85	13	45	3,334
Total (12 mos.)	6,482	288	.....	4	8	170	26	90	7,068

2544 *Southern Pacific Company—Northbound—Statement of carloads passing through Oregon originating at and destined to points outside this State, period Jan., March, May, July, Sept., Dec., 1926*

[Commodity (total)] Page 41

To—	From—								
	California	Nevada, Arizona, New Mexico, Mexico	Idaho, via Ogden	Utah, Wyoming, Colorado, via Ogden	Texas, Louisiana		Other eastern States		Total
					Via Ogden	Via El Paso	Via Ogden	Via El Paso	
Washington	3,912	71	.....	18	.....	219	8	6	4,234
Idaho	362	.....	.....	.....	.....	5	.....	.....	367
Montana	227	2	.....	.....	.....	.....	.....	.....	229
North and South Dakota	34	.....	.....	.....	.....	.....	.....	.....	34
Minnesota	37	.....	.....	.....	.....	.....	.....	.....	37
Wisconsin	1	.....	.....	.....	.....	.....	.....	.....	1
Other eastern States	4	.....	.....	.....	.....	.....	.....	.....	4
Canada	659	8	.....	.....	.....	31	.....	.....	698
Total (6 mos.)	5,236	81	.....	18	.....	255	8	6	5,604
Total (12 mos.)	10,472	162	.....	36	.....	510	16	12	11,208

2545 Briefly analized 11,208 carloads, or 61.33% of the total carloads, of this so-called "bridge" traffic moves northbound through Oregon, while 7,068 carloads, or 38.67%, moves southbound through this State.

92.77%, or 16,954 carloads, of a total of 18,276 carloads of said passing or "bridge" traffic moves between California on the one hand, and points in Washington, Idaho, Montana, North and South Dakota, Minnesota, Wisconsin, other eastern States and Canada on the other, encountering neither Ogden nor El Paso gateways.

2.46% moves between New Mexico on the one hand, and Washington, Idaho, Montana, and Canada on the other and encounters neither Ogden nor El Paso routing.

4.28% moves between Texas, Louisiana, and other eastern States on the one hand, and Washington, Idaho, and Canada on the other, routed via El Paso, Texas.

0.49% moves between Utah, Wyoming, Colorado, Texas, Louisiana, and other eastern States on the one hand, and Washington State on the other routed via Ogden, Utah.

The principal commodities moving northbound as against southbound with total cars and total tons of each are shown by the following table:

2546

Commodity	Northbound		Commodity	Southbound	
	Cars	Tons		Cars	Tons[1]
Cereals	33	864		164	4,295
Fruits	1,609	25,185		325	7,922
Vegetables	919	11,266		408	5,059
Agr. prods. n. o. s.	57	1,123		22	433
Packing hse. prods.	2	23		175	2,905
Livestock	71	829		45	525
Wool	1	14		[2]3	[2]76
Fish and animal prods.	2	45		50	1,117
Forest prods.	18	513		1,406	40,085
Canned goods	30	905		11	328
Iron and steel	23	604		[3]108	[3]2,835
Paper	29	783		131	3,537
Mfg'd prods.	2,143	24,366		148	1,683
Sugar	20	457			
Brick, clay, stone, lime, etc.	108	3,817			
Cement and articles	8	333			
Oils (mineral)	302	9,314			
Ore	21	984		309	14,483
Salt	38	606			
Miscellaneous prods.	110	2,782		29	733
Total	5,604	85,233		3,534	86,016

(Average tons per car 15.21.)

	Cars	Tons	Average
Total (north and south), 6 months	9,138	171,249	18.74
Total (north and south), 12 months	18,276	342,498	18.74

(Average tons per car 24.34.)

[1] Estimated averages based on S. P. traffic (other than originated) for 1926.
[2] Hides.
[3] Includes copper wire.

2547 *Statement of all commodities, by commodity groups, "trans-continental"—Statement showing total carloads and tons of all commodities (by commodity groups) between counties of Benton, Clackamas, Coos, Douglas, Jackson, Josephine, Klamath, Lane, Lincoln, Linn, Marion, Multnomah, Polk, Tillmook, Washington, and Yamhill on the one hand and eastern points on the other, via the Portland, Ogden, and other junctions for the months of January, March, May, July, September, and November, 1926, with grand totals for the twelve months of 1926*

[NOTE.—Numbers 1-16, products of agriculture; 17-28, animals and products; 29-39, products of mines; 40-44, products of forests; 45-69, manufactures and miscellaneous; total, total carload traffic]

Pages, 42, 43

County, commodity groups (numbers and commodities)	Trans-continental, eastbound via—									Trans-continental, westbound via—								
	Portland			Ogden			Other junctions			Portland			Ogden			Other junctions		
	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car
Benton:																		
1-16 Agri.	11	203	18.45	43	750	17.44	1	19	19.00	22	615	27.95						
17-28 Livestock	1	12	12.00							1	12	12.00						
29-39 Mines										8	310	38.75						
40-44 Forests	223	8,397	37.66	475	16,525	34.79	14	515	36.79	1	14	14.00						
45-69 Misc.				8	290	36.25				18	191	10.61	3	86	28.67			
Total	235	8,612	36.65	526	17,565	33.39	15	534	35.60	50	1,142	22.84	3	86	28.67			
Clackamas:																		
1-16 Agri.	37	479	12.95	10	103	10.30	14	240	17.14	10	282	28.20						
17-28 Livestock	2	39	19.50															
29-39 Mines										94	4,884	51.96						
40-44 Forests	37	1,323	35.76	103	3,943	38.28	2	50	25.00	1	25	25.00				1	36	36.00
45-69 Misc.	56	1,278	22.82	16	406	25.38	18	422	23.44	7	140	20.00	3	32	10.67	3	111	37.00
Total	132	3,119	23.63	129	4,452	34.51	34	712	20.94	112	5,331	47.60	3	32	10.67	4	147	36.75
Coos:																		
1-16 Agri.										12	326	27.17				3	54	18.00
17-28 Livestock																		
29-39 Mines										9	394	43.78						
40-44 Forests	77	2,341	30.40	307	10,175	33.14	3	110	36.67									
45-69 Misc.	33	820	24.85	177	4,768	26.94	2	40	20.00	46	382	8.31	31	249	8.03	1	32	32.00
Total	110	3,161	28.74	484	14,943	30.87	5	150	30.00	67	1,102	16.45	31	249	8.03	4	86	21.50

Douglas:																		
1-16 Agri.	650	6,787	10.44	92	1,857	20.18	9	90	10.00	43	1,219	28.35						
17-28 Livestock																		
29-39 Mines																		
40-44 Forests	176	5,676	32.25	376	11,726	31.19	22	697	31.68	14	574	41.00						
45-69 Misc	4	104	26.00	84	1,936	23.05				22	313	14.23	23	249	10.83			
Total	830	12,567	15.14	552	15,519	28.11	31	787	25.39	79	2,106	26.66	23	249	10.83			
Jackson:																		
1-16 Agri.	2	37	18.50	828	12,206	14.74	5	67	13.40	47	1,312	27.91				16	181	11.31
17-28 Livestock																		
29-39 Mines																		
40-44 Forests	19	565	29.74	308	8,580	27.86	5	135	27.00	18	834	46.33	18	813	45.17			
45-69 Misc	3	32	10.67	9	219	24.33				70	1,133	16.19	67	1,226	18.30	1	18	18.00
Total	24	634	26.42	1,145	21,005	18.34	10	202	20.20	135	3,279	24.29	85	2,039	23.99	17	199	11.71
Josephine:																		
1-16 Agri.	8	80	10.00	41	557	13.59	1	10	10.00	11	330	30.00						
17-28 Livestock																		
29-39 Mines																		
40-44 Forests										2	79	39.50						
45-69 Misc				17	548	32.24				10	77	7.70	5	52	10.40			
Total	8	80	10.00	58	1,105	19.05	1	10	10.00	23	486	21.13	5	52	10.40			
Klamath:																		
1-16 Agri.							1	18	18.00	2	51	25.50						
17-28 Livestock																		
29-39 Mines							1	21	21.00									
40-44 Forests	1	27	27.00	3	75	25.00							6	215	35.50	1	27	27.00
45-69 Misc	1	10	10.00	2,097	53,957	25.73	535	13,305	24.87	13	223	17.15						
				24	514	21.42	19	449	23.63	13	244	18.77	123	2,066	16.72	15	321	21.40
Total	2	37	18.50	2,124	54,546	25.68	556	13,793	24.81	28	518	18.50	129	2,269	17.59	16	348	21.75
Lane:																		
1-16 Agri.	3	72	24.00	18	377	20.94	4	119	29.75	74	1,998	27.00	5	99	17.59	14	147	10.50
17-28 Livestock	1	13	13.00	1	13	13.00	1	13	13.00									
29-39 Mines				1	35	35.00				12	322	43.50						
40-44 Forests	904	33,135	36.65	2,794	98,114	35.12	80	2,606	32.58									
45-69 Misc	13	362	27.85	27	890	32.96	1	30	30.00	71	887	12.49	53	553	10.43	5	123	24.60
Total	921	33,582	36.46	2,841	99,429	35.00	86	2,768	32.19	157	3,407	21.70	58	652	11.24	19	270	14.21
2584 Lincoln:																		
1-16 Agri.										1	25	25.00						
17-28 Livestock										2	42	21.00						
29-39 Mines										1	45	45.00						
40-44 Forests	160	5,781	36.13	637	23,299	36.58	16	553	34.56									
45-69 Misc										3	70	23.33	4	107	26.75			
Total	160	5,781	36.13	637	23,299	36.58	16	553	34.56	7	182	26.00	4	107	26.75			

Statement of all commodities, by commodity groups, "trans-continental"—Statement showing total carloads and tons of all commodities (by commodity groups) between counties of Benton, Clackamas, Coos, Douglas, Jackson, Josephine, Klamath, Lane, Lincoln, Linn, Marion, Multnomah, Polk, Tillmook, Washington, and Yamhill on the one hand and eastern points on the other, via the Portland, Ogden, and other junctions for the months of January, March, May, July, September, and November, 1926, with grand totals for the twelve months of 1926—Continued.

NOTE.—Numbers 1-16, products of agriculture; 17-28, animals and products; 29-39, products of mines; 40-44, products of forests 45-69a, manufactures and miscellaneous; total, total carload traffic

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County, commodity groups (numbers and commodities)	Trans-continental, eastbound via—									Trans-continental, westbound via—								
	Portland			Ogden			Other junctions			Portland			Ogden			Other junctions		
	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car
Linn:																		
1-16 Agri.	12	365	30.42	15	413	27.53	6	134	22.33	25	693	27.72						
17-28 Livestock				1	13	13.00												
29-39 Mines										8	390	48.75						
40-44 Forests	115	4,159	36.17	238	7,830	32.90	10	313	31.30									
45-69 Misc	8	181	22.63	20	492	24.60	3	63	21.00	29	279	9.62	22	205	9.32			
Total	135	4,705	34.85	274	8,748	31.93	19	510	26.84	62	1,362	21.97	22	205	9.32			
Marion:																		
1-16 Agri.	195	2,624	13.46	58	686	11.83	32	507	15.84	66	1,673	25.35	1	40	40.00	12	132	11.00
17-28 Livestock	1	12	12.00															
29-39 Mines										31	1,557	50.23	1	38	38.00			
40-44 Forests	472	19,167	40.60	938	34,196	36.46	32	1,119	34.97							2	71	35.50
45-69 Misc	46	1,379	29.98	88	2,686	30.52	13	374	28.77	73	669	9.16	44	480	10.91	9	227	25.22
Total	714	23,182	32.47	1,084	37,568	34.66	77	2,000	25.97	170	3,899	22.94	46	558	12.13	23	430	18.70
Multnomah:																		
1-16 Agri.				14	129	9.21	34	579	17.03	5	107	21.40	13	243	18.69	87	1,023	11.76
17-28 Livestock	1	12	12.00	1	13	13.00	2	21	10.50									
29-39 Mines										9	356	39.56	4	160	40.00			
40-44 Forests	6	174	29.00	150	4,411	29.41	10	301	30.10	6	237	39.50	6	198	33.00	12	392	32.67
45-69 Misc	37	733	19.81	37	938	25.35	14	311	22.21	10	205	20.50	145	2,703	18.64	37	680	18.38
Total	44	919	20.89	202	5,491	27.18	60	1,212	20.20	30	905	30.17	168	3,304	19.67	136	2,095	15.46

Polk:																		
1-16 Agri	17	368	21.65	29	316	10.90				22	652	29.64						
17-28 Livestock	1	10	10.00															
29-39 Mines										4	161	40.25						
40-44 Forests	72	2,714	37.69	241	8,926	37.04	6	183	30.50									
45-69 Misc	2	47	23.50	11	361	32.82	1	8	8.00	8	146	18.25	2	52	26.00	1	20	20.00
																3	16	5.33
Total	92	3,139	34.12	281	9,603	34.17	7	191	27.29	34	959	28.21	2	52	26.00	4	36	9.00
Tillamook:																		
1-16 Agri										18	508	28.22						
17-28 Livestock																		
29-39 Mines																		
40-44 Forests	95	3,264	34.36	473	15,585	32.95	17	586	34.47	6	237	39.50						
45-69 Misc	3	90	30.00	55	1,944	35.35	1	42	42.00									
										10	156	15.60	1	6	6.00			
Total	98	3,354	34.22	528	17,529	33.20	18	628	34.89	34	901	26.50	1	6	6.00			
Washington:																		
1-16 Agri	18	263	14.61	3	32	10.67	11	172	15.64	39	1,101	28.23	1	10	10.00			
17-28 Livestock										1	12	12.00						
29-39 Mines										3	113	37.67						
40-44 Forests	228	7,763	34.05	543	17,289	31.75	19	682	35.89									
45-69 Misc	4	108	27.00	28	975	34.82				4	63	15.75	21	223	10.62			
Total	250	8,134	32.54	574	18,246	31.79	30	854	28.47	47	1,289	27.43	22	233	10.59			
Yamhill:																		
1-16 Agri	29	521	17.97	9	114	12.67	1	20	20.00	39	1,123	28.79						
17-28 Livestock																		
29-39 Mines										3	119	39.67						
40-44 Forests	171	6,343	37.09	318	11,199	35.22	8	284	35.50									
45-69 Misc	6	154	25.67	15	463	30.87	1	31	31.00	63	695	11.03	11	133	12.09			
Total	206	7,018	34.07	342	11,776	34.43	10	335	33.50	105	1,937	18.45	11	133	12.09			
Grand total (6 months)	3,961	118,024	29.80	11,891	360,824	30.63	975	25,239	25.89	1,140	28,805	25.27	613	10,226	16.68	223	3,611	16.19
Grand total (12 months)	7,922	236,048	29.80	23,562	721,648	30.63	1,950	50,478	25.89	2,280	57,610	25.27	1,226	20,452	16.68	446	7,222	16.19

RECAPITULATION (ALL COMMODITIES—TRANS-CONTINENTAL)

1-16 Agri	982	11,799	12.02	1,160	17,540	15.12	119	1,975	16.60	436	12,015	27.56	20	392	19.60	132	1,537	11.64
17-28 Livestock	7	98	14.00	3	39	13.00	4	55	13.75	4	66	16.50						
29-39 Mines				4	110	27.50				222	10,575	47.64	29	1,224	42.21	1	27	27.00
40-44 Forests	2,756	100,829	36.59	10,015	326,253	32.58	779	21,439	27.52	21	499	23.76	6	198	33.00	16	519	32.4
45-69 Misc	216	5,298	24.53	599	16,882	28.18	73	1,770	24.25	457	5,659	12.38	558	8,412	15.08	74	1,528	20.65
Grand total (6 months)	3,961	118,024	29.80	11,781	360,824	30.63	975	25,239	25.89	1,140	28,805	25.27	613	10,226	16.68	223	3,611	16.19
Grand total (12 months)	7,922	236,048	29.80	23,562	721,648	30.63	1,950	50,478	25.89	2,280	57,610	25.27	1,226	20,452	16.68	446	7,222	16.19

2549 *All commodities—"transcontinental."—(Commodity numbers 1–69, inclusive, embracing products of agriculture, livestock, mines, forests, manufactures and miscellaneous)*

THE FOLLOWING STATEMENT IS A RECAPITULATION OF THE TOTAL CARLOADS AND TOTAL TONS OF ALL COMMODITIES (TRANSCONTINENTAL) MOVING BETWEEN THE COUNTIES OF BENTON, CLACKAMAS, COOS, DOUGLAS, JACKSON, JOSEPHINE, KLAMATH, LANE, LINCOLN, LINN, MARION, MULTNOMAH, POLK, TILLAMOOK, WASHINGTON, AND YAMHILL VIA THE PORTLAND, OGDEN, AND OTHER JUNCTIONS GATEWAYS DURING THE MONTHS OF JANUARY, MARCH, MAY, JULY, SEPTEMBER, AND NOVEMBER, 1926, WITH TOTALS FOR THE TWELVE MONTHS OF 1926

(Between) (and) eastern points, via— / County	Transcontinental, eastbound via—									Transcontinental, westbound via—								
	Portland			Ogden			Other junctions			Portland			Ogden			Other junctions		
	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car
Benton	235	8,612	36.65	526	17,565	33.39	15	534	35.60	50	1,142	22.84	3	86	28.67			
Clackamas	132	3,119	23.63	129	4,452	34.51	34	712	20.94	112	5,331	47.60	3	32	10.67	4	147	36.75
Coos	110	3,161	28.74	484	14,943	30.87	5	150	30.00	67	1,102	16.45	31	249	8.03	4	86	21.50
Douglas	830	12,567	15.14	552	15,519	28.11	31	787	25.39	79	2,106	26.66	23	249	10.83			
Jackson	24	634	26.42	1,145	21,005	18.34	10	202	20.20	135	3,279	24.29	85	2,039	23.99	17	199	11.71
Josephine	8	80	10.00	58	1,105	19.05	1	10	10.00	23	486	21.13	5	52	10.40			
Klamath	2	37	18.50	2,124	54,546	25.68	556	13,793	24.81	28	518	18.50	129	2,269	17.59	16	348	21.75
Lane	921	33,582	36.46	2,841	99,429	35.00	86	2,768	32.19	157	3,407	21.70	58	652	11.24	19	270	14.21
Lincoln	160	5,781	36.13	637	23,299	36.58	16	553	34.56	7	182	26.00	4	107	26.75			
Linn	135	4,705	34.85	274	8,748	31.93	19	510	26.84	62	1,362	21.97	22	205	9.32			
Marion	714	23,182	32.47	1,084	37,568	34.66	77	2,000	25.97	170	3,899	22.94	46	558	12.13	23	430	18.70
Multnomah	44	919	20.87	202	5,491	27.18	60	1,212	20.20	30	905	30.17	168	3,304	19.67	136	2,095	15.40
Polk	92	3,139	34.12	281	9,603	34.17	7	191	27.29	34	959	28.21	2	52	26.00	4	36	9.00
Tillamook	98	3,354	34.22	528	17,529	33.20	18	628	34.89	34	901	26.50	1	6	6.00			
Washington	250	8,134	32.54	574	18,246	31.79	30	854	28.47	47	1,289	27.43	22	233	10.59			
Yamhill	206	7,018	34.07	342	11,776	34.43	10	335	33.50	105	1,937	18.45	11	133	12.09			
Total (6 months)	3,961	118,024	29.80	11,781	360,824	30.63	975	25,239	25.89	1,140	28,805	25.27	613	10,226	16.68	223	3,611	16.19
Total (12 months)	7,922	236,048	29.80	23,562	731,648	30.63	1,950	50,478	25.89	2,280	57,510	25.27	1,226	20,452	16.68	446	7,222	16.19

RECAPITULATION

	Cars	Tons	Avge. tons per car
Eastbound via Portland	3,961	118,024	29.80
Eastbound via Ogden	11,781	360,824	30.63
Eastbound via other junctions	975	25,239	25.89
Total (eastbound), 6 months	16,717	504,087	30.15
Westbound via Portland	1,140	28,805	25.27
Westbound via Ogden	613	10,226	16.68
Westbound via other junctions	223	3,611	16.19
Total (westbound), 6 months	1,976	42,642	21.58
Grand total (east and west), 6 months	18,693	546,729	29.25
Grand total (east and west), 12 months	37,386	1,093,458	[1] 29.25

[1] Tons per car.

2550 *Statement showing total number of carloads and total tons, all commodities, by commodity groups, moving between points on Southern Pacific Co. lines in Oregon and the various States, Territories, and countries indicated herein via the Portland, Ogden, and other junctions gateways for the months of January, March, May, July, September, and November, 1926, with totals for the entire year of 1926; also percentage of each commodity group to each State and the percentages of total traffic (all commodities) between Oregon and each State, Territory, or country*

[NOTE.—Percentages columns show percentage relationship to total in preceding columns]

State, Territory, or country	Group I						Group II						Group III						Group IV						Group V					
	Products of agriculture						Animals & products						Products of mines						Products of forests						Manufactures & miscellaneous					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Cars	Tons	%	Cars	Tons	%	Cars	Tons	%	Cars	Tons	%	Cars	Tons	%	Cars	Tons	%	Cars	Tons	%	Cars	Tons	%	Cars	Tons	%	Cars	Tons	%
Alabama	2	27	0.09																3	120	0.03	2	52	4.28	1	25	0.10	15	399	2.56
Arkansas	1	13	0.04	2	60	0.43													32	885	0.20	5	188	15.46				10	320	2.05
Colorado	19	225	0.72	12	377	2.70													601	20,841	4.56				37	989	4.13	46	1,095	7.02
Connecticut	7	73	0.23							2	42	63.64							37	1,082	0.24				3	62	0.26	1	12	0.07
Delaware																			3	92	0.02									
Dist. of Columbia	9	90	0.29				1	13	6.77										11	323	0.07				28	946	3.95			
Florida	3	32	0.10	10	156	1.12													14	404	0.09	3	107	8.80				6	222	1.42
Georgia	9	125	0.40				1	12	6.25										5	178	0.04									
Idaho	2	37	0.12	31	705	5.06	2	25	13.02	1	12	18.18				2	60	0.51	31	1,085	0.24	14	248	20.39	18	285	1.19	6	91	0.58
Illinois	450	6,639	21.20							1	12	18.18	3	85	77.27	2	98	0.83	2,533	84,002	18.73				130	3,570	14.91	74	1,418	9.10
Indiana	15	168	0.54																291	9,926	2.21				24	650	2.71	73	1,093	7.00
Iowa	12	156	0.50	61	1,761	12.63													1,422	45,532	10.15				23	746	3.11	25	639	4.10
Kansas	15	214	0.68	1	44	0.32													488	17,217	3.84				24	756	3.16	4	59	0.38
Kentucky	7	135	0.43																36	1,219	0.27				5	154	0.64	5	124	0.80
Louisiana	31	515	1.64	5	119	0.85													22	571	0.13	4	142	11.68	4	121	0.50	12	285	1.83
Maine																			15	533	0.12							1	20	0.13
Maryland	4	45	0.14													4	170	1.44	25	630	0.14				11	410	1.71	4	103	0.66
Massachusetts	22	546	1.74				1	21	10.94										102	3,189	0.71				8	172	0.72	5	94	0.60
Michigan	20	297	0.95	2	31	0.22							1	25	22.73	3	76	0.64	551	17,515	3.91				66	1,646	6.87	381	2,511	16.11
Minnesota	104	1,291	4.12	11	295	2.12										1	38	0.32	536	30,958	6.90				30	815	3.40	27	801	5.14
Mississippi																			8	219	0.05	2	66	5.43	5				64	0.41
Missouri	26	436	1.39													2	62	0.52	562	17,931	4.00	1	33	2.71	40	1,232	5.14	30	709	4.55
Montana	35	426	1.36	57	1,370	9.83	3	52	27.08							20	828	7.00	54	1,993	0.44				22	416	1.74	12	345	2.21
Nebraska	381	4,324	13.81	207	6,359	45.60													674	23,615	5.27				34	1,090	4.55	33	397	2.55
New Hampshire																			20	586	0.13							2	25	0.16
New Jersey	3	36	0.11																64	1,824	0.41				7	162	0.68	1	21	0.13

New York	710	9,867	31.51				2	26	13.54							4	138	1.17	368	10,347	2.31				70	1,718	7.17	28	505	3.24
North Carolina																			16	441	0.10							5	27	0.17
North Dakota	13	147	0.47																116	4,079	0.91									
Ohio	35	482	1.54																378	12,143	2.71				70	1,870	7.81	95	945	6.06
Oklahoma	17	276	0.88	7	167	1.20													423	14,306	3.19				15	436	1.82	11	183	1.17
Pennsylvania	69	931	2.97	1	14	0.10													233	6,854	1.53				78	2,087	8.71	21	531	3.41
Rhode Island	1	10	0.03																17	481	0.11				1	18	0.08			
South Carolina																			1	25	0.01									
South Dakota	4	69	0.22	23	697	5.00													277	10,133	2.26				2	68	0.28	2	35	0.22
Tennessee	4	120	0.38	1	10	0.07													12	323	0.07	7	226	18.59	4	157	0.66	18	311	1.99
Texas	87	1,439	4.60	10	215	1.54	2	21	10.94							91	5,033	42.56	963	31,480	7.02				72	1,740	7.27	12	146	0.94
Utah	2	30	0.10	1	20	0.14	2	22	11.46							94	4,067	34.39	802	29,392	6.55				26	733	3.06	9	367	2.35
Vermont																			21	719	0.16									
Virginia																			35	1,101	0.25	2	44	3.62	2	83	0.35			
West Virginia																			34	1,008	0.22	1	37	3.04				9	194	1.24
Wisconsin	30	466	1.49	1	23	0.18													1,108	33,236	7.41	2	73	6.00	14	321	1.34	102	1,474	9.45
Wyoming	13	149	0.48													29	1,256	10.62	219	7,670	1.71				3	81	0.34	1	10	0.06
Mexico—Gulf coast	1	8	0.03																35	1,069	0.24				2	34	0.14			
Europe via Atlantic ports	75	953	3.04																24	440	0.10									
Canada, E. of Win	23	517	1.65																25	710	0.16				9	230	0.96	1	15	0.10
West Indies, Cent. & So. Amer. Gulf ports				145	1,519	10.89																								
Europe, via Gulf ports																														
"Export," " " "																			3	94	0.02									
Total (6 months)	2,261	31,314	100%	588	13,944	100%	14	192	100%	4	166	100%	4	110	100%	252	11,826	100%	13,550	448,521	100%	43	1,216	100%	888	23,950	100%	1,089	15,590	100%
Total (12 ")	4,522	62,628		1,176	27,888		28	384		8	132		8	220		504	23,657		27,100	897,042		86	2,432		1,776	47,900		2,178	31,180	

RECAPITULATION

	Cars	%	Tons	%
Group I. Products of agriculture (eastbound and westbound)	5,698	15.24	90,516	8.28
Group II. Animals and products (eastbound and westbound)	36	0.10	516	0.05
Group III. Products of mines (eastbound and westbound)	512	1.37	23,872	2.18
Group IV. Products of forests (eastbound and westbound)	27,186	72.72	899,474	82.26
Group V. Manufactures & miscellaneous (eastbound and westbound)	3,954	10.58	79,080	7.23
Grand total (12 months)	37,386	100%	1,093,458	100%

Statement showing total number of carloads and total tons, all commodities, by commodity groups, moving between points on Southern Pacific Co. lines in Oregon and the various States, Territories, and countries indicated herein via the Portland, Ogden, and other junctions gateways for the months of January, March, May, July, September, and November, 1926, with totals for the entire year of 1926; also percentage of each commodity group to each State and the percentages of total traffic (all commodities) between Oregon and each State, Territory, or country—Continued

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State, territory, or country	Groups I to V, total, eastbound				Groups I to V, total, westbound				Groups I to V, grand total, eastbound and westbound			
	Cars	Per cent	Tons	Per cent	Cars	Per cent	Tons	Per cent	Cars	Per cent	Tons	Per cent
Alabama	6	0.004	172	0.03	17	0.86	451	1.06	23	0.12	623	0.11
Arkansas	33	0.02	898	0.18	17	0.86	568	1.33	50	0.27	1,466	0.27
Colorado	657	3.94	22,055	4.38	58	2.94	1,472	3.45	715	3.82	23,527	4.30
Connecticut	47	0.29	1,217	0.24	3	0.15	54	0.13	50	0.27	1,271	0.23
Delaware	3	0.002	92	0.02					3	0.02	92	0.002
District of Columbia	49	0.30	1,372	0.27					49	0.26	1,372	0.25
Florida	17	0.11	436	0.09	19	0.96	485	1.14	36	0.19	921	0.17
Georgia	15	0.10	315	0.06					15	0.08	315	0.06
Idaho	53	0.32	1,432	0.28	54	2.73	1,116	2.62	107	0.57	2,548	0.47
Illinois	3,116	18.65	94,296	18.71	77	3.90	1,528	3.58	3,193	17.08	95,824	17.53
Indiana	330	1.98	10,774	2.13	73	3.69	1,093	2.56	403	2.16	11,837	2.17
Iowa	1,457	8.72	46,434	9.21	86	4.35	2,400	5.63	1,543	8.25	48,834	8.93
Kansas	527	3.16	18,187	3.61	5	0.25	103	0.24	532	2.85	18,290	3.35
Kentucky	48	0.29	1,508	0.30	5	0.25	124	0.29	53	0.28	1,632	0.30
Louisiana	57	0.35	1,207	0.24	21	1.06	546	1.28	78	0.42	1,753	0.32
Maine	15	0.10	533	0.11	1	0.005	20	0.05	16	0.09	553	0.10
Maryland	40	0.25	1,085	0.22	8	0.40	273	0.64	48	0.26	1,358	0.25
Massachusetts	133	0.80	3,928	0.78	5	0.25	94	0.22	138	0.74	4,022	0.74
Michigan	688	3.82	19,483	3.87	386	19.53	2,618	6.14	1,024	5.48	22,101	4.04
Minnesota	970	5.81	33,064	6.56	39	1.97	1,134	2.66	1,009	5.40	34,198	6.26
Mississippi	13	0.08	346	0.07	4	0.20	130	0.30	17	0.09	476	0.09
Missouri	628	3.76	19,599	3.89	33	1.67	804	1.89	661	3.54	20,403	3.73
Montana	114	0.69	2,887	0.57	89	4.50	2,543	5.96	203	1.09	5,430	0.99
Nebraska	1,089	6.52	29,029	5.76	240	12.15	6,756	15.84	1,329	7.11	35,785	6.55
New Hampshire	20	0.10	586	0.12	2	0.10	25	0.06	22	0.12	611	0.11
New Jersey	74	0.45	2,022	0.40	1	0.005	21	0.05	75	0.40	2,043	0.37
New York	1,150	6.89	21,958	4.36	32	1.62	643	1.51	1,182	6.32	22,601	4.13
North Carolina	16	0.10	441	0.09	5	0.25	27	0.06	21	0.11	468	0.09
North Dakota	129	0.78	4,226	0.84					129	0.69	4,226	0.77
Ohio	483	2.90	14,495	2.88	95	4.81	945	2.22	578	3.09	15,440	2.82
Oklahoma	455	2.73	15,018	2.98	18	0.91	350	0.82	473	2.53	15,368	2.81
Pennsylvania	380	2.28	9,872	1.96	22	1.11	545	1.28	402	2.15	10,417	1.91
Rhode Island	19	0.12	509	0.10					19	0.10	509	0.09

South Carolina	1	0.001	25	0.005					1	0.005	25	0.0005
South Dakota	283	1.70	10,270	2.04	25	1.27	732	1.72	308	1.65	11,002	2.01
Tennessee	20	0.10	600	0.12	26	1.32	547	1.28	46	0.25	1,147	0.21
Texas	1,124	6.73	34,680	6.88	113	5.72	5,394	12.65	1,237	6.62	40,074	7.33
Utah	832	4.98	30,177	5.99	104	5.26	4,454	10.45	936	5.01	34,631	6.33
Vermont	21	0.13	719	0.14					21	0.11	719	0.13
Virginia	37	0.23	1,184	0.23	2	0.10	44	0.10	39	0.21	1,228	0.22
West Virginia	34	0.21	1,008	0.20	10	0.50	231	0.54	44	0.24	1,239	0.23
Wisconsin	1,152	6.90	34,023	6.75	105	5.31	1,572	3.69	1,257	6.72	35,595	6.51
Wyoming	235	1.41	7,900	1.57	30	1.52	1,266	2.97	265	1.42	9,166	1.68
Mexico—Gulf coast	38	0.23	1,111	0.22					38	0.20	1,111	0.20
Europe, via Atlantic ports	99	0.60	1,393	0.28					99	0.53	1,393	0.25
Canada, E. of Win	57	0.35	1,457	0.29	1	0.005	15	0.04	58	0.31	1,472	0.27
West Indies, Cent. and So. Amer. Gulf ports					145	7.34	1,519	3.56	145	0.78	1,519	0.28
Europe, via Gulf ports												
"Export," via Gulf ports	3	0.002	94	0.02					3	0.02	94	0.002
Total (6 months)	16,717	100%	504,087	100%	1,976	100%	42,642	100%	18,693	100%	546,729	100%
Total (12 months)	33,434		1,008,174		3,952		85,284		37,386		1,093,458	

RECAPITULATION

	Cars	Per cent	Tons	Per cent
Groups I to V, all commodities (eastbound)	33,434	89.43	1,008,174	92.20
" " " " " " (westbound)	3,952	10.57	85,284	7.80
Grand total, Groups I to V (12 months)	37,386	100%	1,093,458	100%

2552 *Statement showing total number of carloads and total tons, all commodities, according to commodity groupings, moving between points on Southern Pacific Company lines in Oregon and the various States, Territories, and countries indicated herein via the Portland, Ogden, and other junctions gateways for the months of January, March, May, July, September, and November, 1926*

Between Oregon points and State, Territory, or country	Commodity group 1 to 16, inclusive (products of agriculture)																Commodity group 17 to 28, inclusive (animals and products)															
	Eastbound								Westbound								Eastbound								Westbound							
	Portland		Ogden		Other juncts.		Total		Portland		Ogden		Other juncts.		Total		Portland		Ogden		Other juncts.		Total		Portland		Ogden		Other juncts.		Total	
	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons
Alabama					2	27	2	27																								
Arkansas	1	13					1	13			1	40	1	20	2	60																
Colorado	15	174	4	51			19	225	12	377					12	377																
Connecticut	6	60	1	13			7	73																	2	42					2	42
Delaware																																
Dist. of Col	9	90					9	90																								
Florida	3	32					3	32	6	93	1	16	3	47	10	156					1	13	1	13								
Georgia	2	22			7	103	9	125																								
Idaho	2	37					2	37	31	705					31	705	1	12					1	12	1	12					1	12
Illinois	86	1,110	363	5,515	1	14	450	6,639									1	12	1	13			2	25	1	12					1	12
Indiana	2	31	13	137			15	168																								
Iowa	11	122	1	34			12	156	51	1,545	8	173	2	43	61	1,761																
Kansas	14	201	1	13			15	214	1	44					1	44																
Kentucky	4	45	3	90			7	135																								
Louisiana	3	30			28	485	31	515					5	119	5	119																
Maine																																
Maryland	3	30	1	15			4	45																								
Massachusetts	10	100	12	446			22	546													1	21	1	21								
Michigan	14	159	6	138			20	297			2	31			2	31																
Minnesota	102	1,249	2	42			104	1,291	8	234	3	61			11	295																
Mississippi																																
Missouri	11	157	14	248	1	31	26	436																								
Montana	35	426					35	426	57	1,370					57	1,370	3	52					3	52								
Nebraska	323	3,527	57	781	1	16	381	4,324	206	6,334	1	25			207	6,359																
New Hampshire																																
New Jersey	2	26			1	10	3	36																								
New York	151	1,801	559	8,066			710	9,867											2	26			2	26								
North Carolina																																
North Dakota	13	147					13	147																								
Ohio	14	222	21	260			35	482																								
Oklahoma	14	211	2	52	1	13	17	276	7	167					7	167																

Pennsylvania	54	568	15	363			69	931			1	14			1	14																
Rhode Island	1	10					1	10																								
South Carolina																																
South Dakota																																
Tennessee	4	69					4	69	23	697					23	697																
Texas	1	38	3	82			4	120			1	10			1	10																
Utah	12	164	2	44	73	1,231	87	1,439	4	111	2	22	4	82	10	215					2	21	2	21								
Vermont	1	14	1	16			2	30	1	20					1	20	2	22					2	22								
Virginia																																
West Virginia																																
Wisconsin	17	286	13	180			30	466	1	25					1	20																
Wyoming	10	109	3	40			13	149																								
Mexico—Gulf coast					1	8	1	8																								
Europe, via Atlantic ports	24	347	50	596	1	10	75	953																								
Canada east of Winnipeg	8	172	13	318	2	27	23	517																								
West Inds., Cent. & So. Am. via Gulf ports									28	293			117	1,226	116	1,214																
Europe via Gulf ports "export" via Gulf ports																																
Total (6 months)	982	11,799	1,160	17,540	119	1,975	2,261	31,314	436	12,015	20	392	132	1,537	588	13,944	7	98	3	39	4	55	14	192	4	66					4	66
Total (12 months)	1,964	23,598	2,320	35,080	238	3,950	4,522	62,628	872	24,030	40	784	264	3,074	1,176	27,888	14	196	6	78	8	110	28	384	8	132					8	132

RECAPITULATION

	Cars	Tons		Cars	Tons		Cars	Tons		Cars	Tons
Eastbound via Portland	982	11,799	Westbound via Portland	436	12,015	Eastbound via Portland	2	98	Westbound via Portland	4	66
" " Ogden	1,160	17,540	" " Ogden	20	392	" " Ogden	3	39	" " Ogden		
" " other junctions	119	1,975	" " other junctions	132	1,537	" " other junctions	4	55	" " other junctions		
Total (6 months)	2,261	31,314	Total (6 months)	588	13,944	Total (6 months)	14	192	Total (6 months)	4	66
Total (12 months)	4,522	62,628	Total (12 months)	1,176	27,888	Total (12 months)	28	384	Total (12 months)	8	132

Grand total, eastbound and westbound (12 months), 5,698 cars and 90,516 tons.

Grand total, eastbound and westbound (12 months), 36 cars and 516 tons.

Reference: Southern Pacific Company special statements 266 and 266-A (1927).

Statement showing total number of carloads and total tons, all commodities, according to commodity groupings, moving between points on Southern Pacific Company lines in Oregon and the various States, Territories, and countries indicated herein via the Portland, Ogden, and other junctions gateways for the months of January, March, May, July, September, and November, 1926.—Continued

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Between Oregon and State, territory or country	Commodity group 29 to 39, inclusive (products of mines)																Commodity group 40 to 44, inclusive (products of forests)													
	Eastbound								Westbound								Eastbound								Westbound					
	Portland		Ogden		Other juncts.		Total		Portland		Ogden		Other juncts.		Total		Portland		Ogden		Other juncts.		Total		Portland		Ogden		Other juncts.		Total	
	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons
Alabama																	3	120					3	120					2	52	2	52
Arkansas																	132	4,875	462	15,788	7	207	601	20,841								
Colorado																			35	1,041	2	41	37	1,082								
Connecticut																			3	92			3	92								
Delaware																			11	323			11	323								
District of Columbia																			7	243	7	161	14	404					3	107	3	107
Florida																	4	152			1	26	5	178								
Georgia									2	60					2	60	30	1,035	1	50			31	1,085	14	248					14	248
Idaho			3	85			3	85			2	98			2	98	58	2,140	2,474	81,832	1	30	2,533	84,002								
Illinois																	4	140	287	9,786			291	9,926								
Indiana																	60	2,239	1,356	43,147	6	146	1,422	45,532								
Iowa																	28	1,063	453	15,985	7	169	488	17,217								
Kansas																	7	206	27	961	2	52	36	1,219								
Kentucky																	2	40	3	88	17	443	22	571	1	39			3	103	4	142
Louisiana																			15	533			15	533								
Maine									3	143			1	27	4	170	2	30	21	556	2	44	25	630								
Maryland																			98	3,093	4	96	102	3,189								
Massachusetts			1	25			1	25	3	76					3	76	113	4,272	438	13,243			551	17,515								
Michigan											1	38			1	38	719	27,030	116	3,904	1	24	836	30,958								
Minnesota																	2	70	2	58	4	91	8	219	1	36			1	30	2	66
Mississippi											2	62			2	62	21	788	535	17,017	6	126	562	17,931	1	33					1	33
Missouri									20	828					20	828	54	1,903					54	1,903								
Montana																	265	9,504	408	14,071	1	40	674	23,615								
Nebraska																	3	71	17	515			20	586								
New Hampshire																	1	40	60	1,699	3	85	64	1,824								
New Jersey									4	138					4	138	14	532	214	6,361	140	3,454	368	10,347								
New York																			7	222	9	219	16	441								
North Carolina																			1	30			116	4,079								
North Dakota																	115	4,049	357	11,463	7	173	378	12,143								
Ohio																	14	507	354	12,311	44	1,146	423	14,308								
Oklahoma																	25	849	206	6,009	8	104	239	6,954								
Pennsylvania																	30	689														

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Statement showing total number of carloads and total tons, all commodities, according to commodity groupings, moving between points on Southern Pacific Company lines in Oregon and the various States, Territories, and countries indicated herein via the Portland, Ogden, and other junctions gateways for the months of January, March, May, July, September, and November, 1926—Continued

2554 Between Oregon points and State, territory, or country	Commodity group 45 to 69, inclusive (manufactures and miscellaneous)															
	Eastbound								Westbound							
	Portland		Ogden		Other juncts.		Total		Portland		Ogden		Other juncts.		Total	
	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons
Alabama			1	25			1	25	4	89	4	131	7	179	15	399
Arkansas											4	121	6	199	10	320
Colorado	14	353	23	636			37	989	17	487	29	608			46	1,095
Connecticut	2	42	1	20			3	62			1	12			1	12
Delaware																
District of Columbia	1	26	27	920			28	946								
Florida													6	222	6	222
Georgia																
Idaho	18	285					18	285	6	91					6	91
Illinois	14	356	116	3,214			130	3,570	29	452	44	934	1	32	74	1,418
Indiana	7	164	17	486			24	650	19	174	49	869	5	50	73	1,093
Iowa	7	253	16	493			23	746	7	137	17	468	1	34	25	639
Kansas	5	158	14	461	5	137	24	756	3	38	1	21			4	59
Kentucky			4	123	1	31	5	154	3	84	2	40			5	124
Louisiana			1	33	3	88	4	121	3	53	1	6	8	226	12	285
Maine									1	20					1	20
Maryland			11	410			11	410	1	11	1	50	2	42	4	103
Massachusetts	1	23	7	149			8	172	3	52	2	42			5	94
Michigan	10	270	56	1,376			66	1,646	168	979	212	1,527	1	5	381	2,511
Minnesota	25	657	5	158			30	815	18	451	9	350			27	801
Mississippi	3	65			2	62	5	127					2	64	2	64
Missouri	4	116	34	1,049	2	67	40	1,232	3	90	27	619			30	709
Montana	22	416					22	416	12	345					12	345
Nebraska	10	312	24	778			34	1,090	11	238	22	159			33	397
New Hampshire									1	10	1	15			2	25
New Jersey	1	20	6	142			7	162			1	21			1	21
New York	19	462	46	1,182	5	74	70	1,718	20	366	6	106	2	33	28	505
North Carolina													5	27	5	27
North Dakota																
Ohio	5	98	65	1,772			70	1,870	53	323	37	591	5	31	95	945
Oklahoma	4	87	10	316	1	33	15	436	2	31	8	134	1	18	11	183
Pennsylvania	7	173	71	1,914			78	2,087	4	87	16	423	1	21	21	531
Rhode Island			1	18			1	18								

South Carolina																
South Dakota	2	68					2	68	2	35					2	35
Tennessee			3	116	1	41	4	157			4	71	14	240	18	311
Texas	12	306	9	231	51	1,203	72	1,740	5	41			7	105	12	146
Utah	16	414	10	319			26	733	7	274	2	93			9	367
Vermont																
Virginia			2	83			2	83								
West Virginia									2	47	7	147			9	194
Wisconsin	3	69	11	252			14	321	51	620	51	854			102	1,474
Wyoming	3	81					3	81	1	10					1	10
Mexico—Gulf coast					2	34	2	34								
Europe via Atlantic ports																
Canada east of Winnipeg	1	24	8	206			9	230	1	15					1	15
West Inds., Cent. & So. Am. via Gulf ports																
Europe via Gulf ports																
"Export" via Gulf ports																
Total (6 months)	216	5,298	599	16,882	73	1,770	888	23,950	457	5,650	558	8,412	74	1,528	1,089	15,590
Total (12 months)	432	10,596	1,198	33,764	146	3,540	1,776	47,900	914	11,300	1,116	16,824	148	3,056	2,178	31,180

RECAPITULATION

	Cars	Tons		Cars	Tons
Eastbound via Portland	216	5,298	Westbound via Portland	457	5,650
" " Ogden	599	16,882	" " Ogden	558	8,412
" " other junctions	73	1,770	" " other junctions	74	1,528
Total (6 months)	888	23,950	Total (6 months)	1,089	15,590
Total (12 months)	1,776	47,900	Total (12 months)	2,178	31,180

Grand total, eastbound and westbound (12 months), 3,954 cars and 79,080 tons

Statement showing total number of carloads and total tons, all commodities, according to commodity groupings, moving between points on Southern Pacific Company lines in Oregon and the various States, Territories, and countries indicated herein via the Portland, Ogden, and other junctions gateways for the months of January, March, May, July, September, and November, 1926—Continued

RECAPITULATION, ALL COMMODITIES

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	Cars	Tons
Eastbound via Portland	3,961	118,024
" " Ogden	11,781	360,824
" " other junctions	975	25,239
Total	16,717	504,087
Westbound via Portland	1,140	28,805
" " Ogden	613	10,226
" " other junctions	223	3,611
Total	1,976	42,642
Grand total (6 months)	18,693	546,729
" " (12 months)	37,386	1,093,458

	Cars	Tons
Eastbound via Portland	3,961	118,024
Westbound " "	1,140	28,805
Total	5,101	146,829
Eastbound via Ogden	11,781	360,824
Westbound " "	613	10,226
Total	12,394	371,050
Eastbound via other junctions	975	25,239
Westbound " " "	223	3,611
Total	1,198	28,850

	Cars	Tons
Total, east and west, via Portland	5,101	146,829
" " " " " Ogden	12,394	371,050
" " " " " other junctions	1,198	28,850
Grand total (6 months)	18,693	546,729
" " (12 months)	37,386	1,093,458

Reference: S. P. Co. special statements 266 and 266-A (1927).

THE FOLLOWING TABLE SHOWS THE TOTAL NUMBER OF CARLOADS AND TONS OF FOREST PRODUCTS SHIPPED FROM AND TO EACH OF THE SIXTEEN COUNTIES (BENTON, CLACKAMAS, COOS, DOUGLAS, JACKSON, JOSEPHINE, KLAMATH, LANE, LINCOLN, LINN, MARION, MULTNOMAH, POLK, TILLAMOOK, WASHINGTON, YAMHILL) VIA PORTLAND, OGDEN, AND OTHER JUNCTION GATEWAYS FOR THE MONTHS OF JANUARY, MARCH, MAY, JULY, SEPTEMBER, AND NOVEMBER, 1926, WITH TOTALS FOR THE 12 MONTHS OF 1926

Page 50

County	Eastbound via—									Westbound via—								
	Portland			Ogden			Other junctions			Portland			Ogden			Other junctions		
	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car
Benton	223	8,397	37.65	475	16,525	34.79	14	515	36.79	1	14	14.00						
Clackamas	37	1,323	35.76	103	3,943	38.28	2	50	25.00	1	25	25.00				1	36	36.00
Coos	77	2,341	30.40	307	10,175	33.14	3	110	36.67									
Douglas	176	5,676	32.25	376	11,726	31.19	22	697	31.68									
Jackson	19	565	29.74	308	8,580	27.86	5	135	27.00									
Josephine				17	548	32.24												
Klamath	1	27	27.00	2,097	53,957	25.73	535	13,305	24.87	13	223	17.15						
Lane	904	33,135	36.65	2,794	98,114	35.12	80	2,606	32.58									
Lincoln	160	5,781	36.13	637	23,299	36.58	16	553	34.56									
Linn	115	4,159	36.17	238	7,830	32.90	10	313	31.30									
Marion	472	19,167	40.61	938	34,196	36.46	32	1,119	34.97									
Multnomah	6	174	29.00	150	4,411	29.41	10	301	30.10	6	237	39.50	6	198	33.00	2	71	35.50
Polk	72	2,714	37.69	241	8,926	37.04	6	183	30.50							12	392	32.67
Tillamook	95	3,264	34.36	473	15,585	32.95	17	586	34.47							1	20	20.00
Washington	228	7,763	34.05	543	17,239	31.75	19	682	35.89									
Yamhill	171	6,343	37.09	318	11,199	35.22	8	284	35.50									
Total (6 months)	2,756	100,829	36.59	10,015	326,253	32.58	779	21,439	27.52	21	499	23.76	6	198	33.00	16	519	32.44
Total (12 months)	5,512	201,658	36.59	20,030	652,506	32.58	1,558	42,878	27.52	42	998	23.76	12	396	33.00	32	1,038	32.44

RECAPITULATION

Eastbound via Portland	2,756	100,829	36.59
Eastbound via Ogden	10,015	326,253	32.58
Eastbound via other junctions	779	21,439	27.52
Westbound via Portland	21	499	23.76
Westbound via Ogden	6	198	33.00
Westbound via other junctions	16	519	32.44
Grand total (6 months)	13,593	449,737	33.09
Grand total (12 months)	27,186	899,474	33.09

2556 *Statement showing distribution of forest products—"Transcontinental"—(Commodity class numbers 40 to 44, inclusive)*

THE FOLLOWING STATEMENT SHOWS THE DISTRIBUTION OF FOREST PRODUCTS FROM & TO THE SIXTEEN OREGON COUNTIES (BENTON, CLACKAMAS, COOS, DOUGLAS, JACKSON, JOSEPHINE, KLAMATH, LANE, LINCOLN, LINN, MARION, MULTNOMAH, POLK, TILLAMOOK, WASHINGTON, AND YAMHILL TO THE STATES AND COUNTRIES INDICATED VIA THE PORTLAND, OGDEN AND OTHER JUNCTIONS GATEWAYS FOR THE SIX MONTHS OF JANUARY, MARCH, MAY, JULY, SEPTEMBER, AND NOVEMBER, 1926, WITH TOTALS FOR THE TWELVE MONTHS OF 1926

Pages 51, 52

State or country	Eastbound via—									Westbound via—								
	Portland			Ogden			Other junctions			Portland			Ogden			Other junctions		
	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car
Alabama	3	120	40.00													2	52	26.00
Arkansas				22	678	30.82	10	207	20.70	1	56	56.00	1	32	32.00	3	100	33.33
Colorado	132	4,875	36.93	462	15,788	34.17	7	178	25.43									
Connecticut				35	1,041	29.74	2	41	20.50									
Delaware				3	92	30.67												
District of Columbia				11	323	29.36												
Florida				7	243	34.71	7	161	23.00							3	107	35.66
Georgia	4	152	38.00				1	26	26.00									
Idaho	30	1,035	34.50	1	50	50.00				14	248	17.71						
Illinois	58	2,140	36.90	2,474	81,832	33.08	1	30	30.00									
Indiana	4	140	35.00	287	9,786	34.10												
Iowa	60	2,239	37.32	1,356	43,147	31.82	6	146	24.33									
Kansas	28	1,063	37.96	453	15,985	35.29	7	169	24.14									
Kentucky	7	206	29.43	27	961	35.59	2	52	26.00									
Louisiana	2	40	20.00	3	88	29.33	17	443	26.06	1	39	39.00				3	103	34.33
Maine				15	533	35.53												
Maryland	2	30	15.00	21	556	26.48	2	44	22.00									
Massachusetts				98	3,093	31.56	4	96	24.00									
Michigan	113	4,272	37.81	438	13,243	30.24												
Minnesota	719	27,030	37.59	116	3,904	33.66	1	24	24.00									
Mississippi	2	70	35.00	2	58	29.00	4	91	22.75	1	36	36.00				1	30	30.00
Missouri	21	788	37.52	535	17,017	31.81	6	126	21.00	1	33	33.00						
Montana	54	1,993	36.91															
Nebraska	265	9,504	35.86	408	14,071	34.49	1	40	40.00									
New Hampshire	3	71	23.67	17	515	30.29												
New Jersey	1	40	40.00	60	1,699	28.32	3	85	28.33									
New York	14	532	38.00	214	6,361	29.72	140	3,454	24.67									
North Carolina				7	222	31.71	9	219	24.33									
North Dakota	116	4,049	35.21	1	30	30.00												
Ohio	14	507	36.21	357	11,463	32.11	7	173	24.71									

Oklahoma	25	849	33.96	354	12,311	34.78	44	1,146	26.05										
Pennsylvania	20	658	32.90	208	6,092	29.29	5	104	20.80										
Rhode Island				17	481	28.29													
South Carolina							1	25	25.00										
South Dakota	275	10,077	36.64	2	56	28.00													
Tennessee				12	323	26.92								3	99	33.00	4	127	31.75
Texas	360	13,186	36.63	155	5,233	33.76	448	13,061	29.15										
Utah	121	4,358	36.02	681	25,034	36.76													
Vermont	1	40	40.00	20	679	33.95													
Virginia	7	280	40.00	26	766	29.46	2	55	27.50	1	14	14.00	1	30	30.00				
West Virginia				31	940	30.32	3	68	22.67				1	37	37.00				
Wisconsin	136	4,847	35.64	969	28,312	29.20	3	77	25.67	2	73	36.50							
Wyoming	156	5,477	35.11	63	2,193	34.81													
Mexico—Gulf coast				2	65	32.50	33	1,004	30.42										
Europe via Atlantic ports				24	440	18.33													
Canada east of Winnipeg	4	161	40.25	21	549	26.14													
West Indies—Central and So. America via Gulf ports																			
Europe via Gulf ports																			
"Export," via Gulf ports							3	94	31.33										
Total (6 months)	2,756	100,829	36.59	10,015	326,253	32.58	779	21,439	27.52	21	499	23.76	6	198	33.00	16	519	32.44	
Total (12 months)	5,512	201,658	36.59	20,030	652,506	32.58	1,558	42,878	27.52	42	998	23.76	12	396	33.00	32	1,038	32.44	

RECAPITULATION—FOREST PRODUCTS (COMMODITY CLASS NOS. 40 TO 44, INCLUSIVE)

	Cars	Tons	Avge. tons per car
Eastbound via Portland	2,756	100,829	36.59
Eastbound via Ogden	10,015	326,253	32.58
Eastbound via other junctions	779	21,439	27.52
Westbound via Portland	21	499	23.76
Westbound via Ogden	6	198	33.00
Westbound via other junctions	16	519	32.44
Grand total (6 months)	13,593	449,737	33.09
Grand total (12 months)	27,186	899,474	33.09

2558 *Statement showing the total carloads and total tons of forest products (with commodity segregations) moving between points on the lines of the Southern Pacific Company in Oregon situated in the various counties named and the States, Territories, and countries shown herein via the Portland, Ogden, and other junctions gateways for the months of Jan., Mar., May, July, Sept., and November, 1926.*

[Key to commodities: 40. Logs, posts, poles, and cordwood; 41. Ties; 42. Pulpwood (no statistics herein); 43. Lumber, timber, box shooks, staves, and headings; 44. Other products of forests]

[NOTE.—Numbers preceding dash denote carloads; numbers following dash denote tons]

Pages 53, 54

	Alabama						Arkansas						Colorado					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland 1	Ogden 2	Other junctions. 3	Portland 4	Ogden 5	Other junctions. 6	Portland 7	Ogden 8	Other junctions. 9	Portland 10	Ogden 11	Other junctions. 12	Portland 13	Ogden 14	Other junctions. 15	Portland 16	Ogden 17	Other junctions. 18
Benton:																		
40. Logs													3- 117					
41. Ties													7- 200	25- 873				
43. Lbr																		
44. Other																		
Clackamas:																		
40. Logs														1- 40				
41. Ties													4- 150	7- 250				
43. Lbr																		
44. Other																		
Coos:																		
40. Logs																		
41. Ties													1- 20	14- 580				
43. Lbr																		
44. Other																		
Douglas:														22- 100				
40. Logs														8- 313				
41. Ties								2- 70					4- 115	20- 636				
43. Lbr																		
44. Other																		
Jackson:																		
40. Logs													1- 25					
41. Ties								2- 60						9- 270				
43. Lbr																		
44. Other																		
Josephine:																		
40. Logs														1- 40				
41. Ties																		
43. Lbr																		
44. Other																		

Klamath:																			
40. Logs															80–1,226	8–113			
41. Ties																			
43. Lbr								11–290	10–207										
44. Other																			
Lane:																			
40. Logs															1– 29				
41. Ties														16– 617	14– 550				
43. Lbr								2– 80						36–1,339	129–4,672	1– 32			
44. Other																			
Lincoln:																			
40. Logs																			
41 Ties																			
43. Lbr								1– 40						6– 220	6– 210				
44. Other																			
Linn:																			
40. Logs														1– 40					
41. Ties														3– 109	5– 172				
43. Lbr														7– 265	19– 660	1– 33			
44. Other																			
Marion:																			
40. Logs																			
41. Ties																			
43. Lbr								1– 40						4– 155	10– 385				
44. Other														1– 40	43–1,415				
2559 Multnomah:																			
40. Logs																			
41. Ties																			
43. Lbr							1–32			1–56	1–32	3–100			4– 160				
44. Other																			
Polk:																			
40. Logs																			
41. Ties							1–20												
43. Lbr	3–120														5– 192				
44. Other														1– 40	8– 278				
Tillamook:																			
40. Logs																			
41. Ties																			
43. Lbr														1– 26					
44. Other														1– 32	10– 375				
Washington:																			
40. Logs																			
41. Ties																			
43. Lbr														6– 260	1– 37				
44. Other								2– 68						22– 756	56–1,864				
Yamhill:																			
40. Logs																			
41. Ties															1– 35				
43. Lbr														5– 206					
44. Other								1– 30						2– 80	12– 426				
Total	3–120						2–52	22–678	10–207	1–56	1–32	3–100		132–4,875	462–15,788	7–178			

Statement showing the total carloads and total tons of forest products (with commodity segregations) moving between points on the lines of the Southern Pacific Company in Oregon situated in the various counties named and the States, Territories, and countries shown herein via the Portland, Ogden, and other junctions gateways for the months of Jan., Mar., May, July, Sept., and November, 1926 —Continued

Pages 55-63

	Connecticut						Delaware						District of Columbia					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.
Douglas:																		
43. Lbr		1- 23																
Jackson:																		
43. Lbr		1- 30																
Klamath:																		
43. Lbr		17- 434	2-41					1-22						7-183				
Lane:																		
43. Lbr		3- 113						2-70										
Lincoln:																		
43. Lbr		9- 330																
Marion:																		
43. Lbr		1- 40																
Multnomah:																		
43. Lbr		3- 71																
Polk:																		
43. Lbr														2-70				
Tillamook:																		
43. Lbr														1- 30				
Washington:																		
43. Lbr														1- 40				
Total		35-1,041	2-41					3-92						11-323				

2560	Florida						Georgia						Idaho					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.
Benton:																		
43. Lbr.													3-105					
Clackamas:																		
40. Logs																1- 25		
43. Lbr.													1- 30					
44. Other						1- 36												
Coos:																		
43. Lbr.													1- 27					
Douglas:																		
43. Lbr.							2- 85						1- 37					
Klamath:																		
40. Logs																10-174		
43. Lbr.		1- 23	7-161						1-26							3- 49		
Lane:																		
41. Ties														1-50				
43. Lbr.							2- 67						12-410					
Lincoln:																		
43. Lbr.		5-180											1- 37					
Linn:																		
43. Lbr.													2- 69					
Marion:																		
43. Lbr.		1- 40											6-215					
44. Other						2- 71												
Washington:																		
43. Lbr.													1- 40					
Yamhill:																		
43. Lbr.													2- 65					
Total		7-243	7-161			3-107	4-152		1-26				30-1, 035	1-50		14-248		

Statement showing the total carloads and total tons of forest products (with commodity segregations) moving between points on the lines of the Southern Pacific Company in Oregon situated in the various counties named and the States, Territories, and countries shown herein via the Portland, Ogden, and other junctions gateways for the months of Jan., Mar., May, July, Sept., and November, 1926—Continued

	Illinois						Indiana						Iowa					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.
Benton:																		
43. Lbr.	15- 578	179-5,989					1- 30	10- 366					3- 120	46- 1,686				
Clackamas:																		
43. Lbr.	3- 111	49-1,883						1- 30					2- 80	4- 160				
Coos:																		
43. Lbr.		116-4,040						12- 406						6- 80				
Douglas:																		
43. Lbr.	8- 293	93-2,788						7- 158					4- 113	54- 1,707				
2561 Jackson:																		
43. Lbr.		56- 1,692						11- 330						16- 160				
Josephine:																		
43. Lbr.		3- 100												1- 22				
Klamath:																		
43. Lbr.		300- 7,811	1-30					27- 749						448-11,498	6-146			
Lane:																		
40. Logs	3- 50							46-1,668					17- 642	266- 9,318				
43. Lbr.	11- 418	932-32,136						1- 50										
44. Other																		
Lincoln:																		
43. Lbr.	3- 110	181- 6,634						52-1,998					2- 84	32- 1,164				
Linn:																		
40. Logs		3- 100						5- 146					3- 121	35- 1,258				
43. Lbr.	2- 79	38- 1,183																
Marion:																		
43. Lbr.	4- 166	191- 6,683					3-110	20- 715					16- 619	170- 6,412				
Multnomah:																		
43. Lbr.		41- 1,205						13- 413					2- 58	8- 257				
Polk:																		
43. Lbr.	2- 60	59- 2,186						11- 385						21- 799				
Tillamook:																		
43. Lbr.	1- 35	87- 2,723						15- 513					4- 140	100- 2,973				
Washington:																		
43. Lbr.		94- 2,845						43-1,466					6- 226	73-2,357				
Yamhill:																		
41. Ties		1- 30																
43. Lbr.	6- 210	51- 1,804						13- 393					1- 36	76- 2,806				
Total	58-2,140	2,474-81,832	1-30				4-140	287-9,786					60-2,239	1,356-43,147	6-146			

	Kansas						Kentucky						Louisiana					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.
Benton:																		
43. Lbr.	3- 98	31- 1,187																
Clackamas:																		
43. Lbr.		2- 80																
Coos:																		
43. Lbr.		3- 69																
Douglas:																		
40. Logs																		
43. Logs	1- 40	9- 303					2- 26	1- 40							1- 40			
Jackson:																		
43. Lbr.		4- 270						1- 30										
2562 Klamath:																		
43. Lbr.		31- 817	7-169					4- 93	2-52						15-363			
Lane:																		
40. Logs		1- 23						1- 26					2-40					
41. Ties	1- 50																	
43. Lbr.	11- 440	129- 4,616					5-180	19-743										
Lincoln:																		
43. Lbr.		35- 1,185												1-40				
Linn:																		
43. Lbr.		26- 873																
Marion:																		
43. Lbr.	2- 80	99- 3,825													1-40			
Multnomah:																		
43. Lbr.		6- 165														1-39		3-103
Polk:																		
43. Lbr.		8- 320																
Tillamook:																		
43. Lbr.	1- 40	7- 253																
Washington:																		
43. Lbr.	8- 278	48- 1,467						1- 29						2-48				
Yamhill:																		
43. Lbr.	1- 37	14- 532																
Total	28-1,063	453-15,985	7-169				7-206	27-961	2-52				2-40	3-88	17-443	1-39		3-103

Statement showing the total carloads and total tons of forest products (with commodity segregations) moving between points on the lines of the Southern Pacific Company in Oregon situated in the various counties named and the States, Territories, and countries shown herein via the Portland, Ogden, and other junctions gateways for the months of Jan., Mar., May, July, Sept., and November, 1926—Continued

	Maine						Maryland						Massachusetts					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.
Coos:																		
43. Lbr.		4-161												11- 371				
44. Other														1- 15				
Douglas:																		
43. Lbr.								1- 23										
Jackson:																		
43. Lbr.														2- 60				
Klamath:																		
43. Lbr.		2- 47						12-294	2-44					34- 841	4-96			
Lane:																		
43. Lbr.														2- 63				
Lincoln:																		
43. Lbr.		4-150												33-1, 230				
44. Other								1- 15										
Marion:																		
43. Lbr.		5-175						2- 60						3- 110				
2563 Multnomah:																		
43. Lbr.														5- 166				
Polk:																		
43. Lbr.								2- 80						1- 40				
44. Other							1-15											
Tillamook:																		
43. Lbr.								1- 40						4- 150				
44. Other							1-15	1- 15										
Washington:																		
43. Lbr.								1- 29										
Yamhill:																		
43. Lbr.														2- 47				
Total		15-533					2-30	21-556	2-44					98-3, 093	4-96			

	Michigan						Minnesota						Mississippi					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.
Benton:																		
43. Lbr.	11- 475	19- 650					48-1,777	13- 431										
Clackamas:																		
43. Lbr.		1- 40					2- 80	1- 40										
Coos:																		
40. Logs		7- 248																
43. Lbr.		22- 667					3- 74	7- 242										
44. Other		17- 580																
Douglas:																		
43. Lbr.	5- 150	8- 245					49- 1,559	5- 128										
Jackson:																		
43. Lbr.	1- 30	33- 990					1- 30	3- 90										
Josephine:																		
43. Lbr.								1- 22										
Klamath:																		
43. Lbr.		100- 2,498						9- 236	1-24						4-91			
Lane:																		
40. Logs	2- 40	34- 738																
41. Ties							1- 40											
43. Lbr.	30-1,124	88- 2,840					241- 8,707	39-1,391					1-30					
Lincoln:																		
43. Lbr.	7- 280	14- 540					61- 2,179	7- 264					1-40					
Linn:																		
43. Lbr.	3- 110	3- 101					27- 939	8- 225										
Marion:																		
43. Lbr.	33-1,313	10- 345					181- 8,013	1- 40										
2564 Multnomah:																		
43. Lbr.	1- 38	14- 462					1- 34									1-36		1-30
Polk:																		
43. Lbr.	1- 45	9- 340					17- 670	6- 265						1-40				
Tillamook:																		
40. Logs														1-18				
43. Lbr.		24- 850					24- 785	8- 292										
Washington:																		
41. Ties							2- 83											
43. Lbr.	10- 341	21- 684					37- 1,203	6- 168										
Yamhill:																		
43. Lbr.	9- 326	13- 440					24- 857	2- 70										
44. Other		1- 15																
Total	113-4,272	438-13,243					719-27,030	116-3,904	1-24				2-70	2-58	4-91	1-36		1-30

Statement showing the total carloads and total tons of forest products (with commodity segregations) moving between points on the lines of the Southern Pacific Company in Oregon situated in the various counties named and the States, Territories, and countries shown herein via the Portland, Ogden, and other junctions gateways for the months of Jan., Mar., May, July, Sept., and November, 1926—Continued

	Missouri						Montana						Nebraska					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.
Benton:																		
43. Lbr.	4-140	25- 833					8- 297						18- 734	31- 1,180				
Clackamas:																		
43. Lbr.		11- 430					2- 80						2- 60	1- 30				
Coos:													5- 140					
40. Logs													2- 41	2- 60				
43. Lbr.		30- 922											18- 543	30- 969				
Douglas:																		
43. Lbr.	1- 50	37- 1,106					3- 95							2- 60				
Jackson:																		
43. Lbr.		8- 210												4- 111				
Josephine:																		
43. Lbr.		3- 108												38- 946				
Klamath:																		
43. Lbr.		109- 2,761	6-126															
Lane:																		
41. Ties		1- 20											96-3,497	118- 4,227				
43. Lbr.	11-418	121- 4,394					18- 690											
Lincoln:																		
43. Lbr.	2- 80	23- 863					4- 142						2- 77	14- 536				
Linn:																		
43. Lbr.	1- 40	23- 748					7- 249						9- 348	15- 505				
Marion:																		
43. Lbr.		39- 1,267					1- 40						31-1,206	40- 1,579	1-40			
2565 Multnomah:																		
43. Lbr.		10- 247		1-33														
Polk:																		
43. Lbr.		15- 547					1- 40						6- 240	8- 310				
Tillamook:																		
43. Lbr.		31-1,000											11- 317	18- 575				
44. Other		1- 15																
Washington:													1- 33					
41. Ties													31- 978	44- 1,405				
43. Lbr.		21- 660					5- 167											
Yamhill:													33-1,200	43- 1,578				
43. Lbr.	2- 60	27- 891					5- 193											
Total	21-7885	35-17,017	6-126	1-33			54-1,993						265-9,504	408-14,671	1-40			

	New Hampshire						New Jersey						New York					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.
Benton:																		
43. Lbr.														5- 182				
Coos:																		
43. Lbr.		2- 38						1- 18						6- 246				
Douglas:																		
43. Lbr.														1- 23				
Jackson:																		
43. Lbr.								8- 240						21- 630	3- 90			
Josephine:																		
43. Lbr.														1- 40				
Klamath:																		
43. Lbr.		3- 85						35- 853	3-85					110-2, 781	137-3, 364			
Lane:																		
40. Logs.	2-44	6-162												1- 22				
43. Lbr.								4- 146						9- 351				
Lincoln:																		
43. Lbr.		5-190						8- 300						12- 440				
44. Other.														1- 15				
Marion:																		
43. Lbr.		1- 40						1- 22						22- 845				
Multnomah:																		
43. Lbr.								1- 40						5- 133				
2566 Polk:																		
43. Lbr.							1-40	2- 80					11-419	9- 320				
Tillamook:																		
Lbr.	1-27												1- 40	8- 230				
Washington:																		
43. Lbr.													2- 73	1- 23				
Yamhill:																		
43. Lbr.														2- 80				
Total.	3-71	17-515					1-40	60-1, 699	3-85				14-532	214-6, 361	140-3, 454			

Statement showing the total carloads and total tons of forest products (with commodity segregations) moving between points on the lines of the Southern Pacific Company in Oregon situated in the various counties named and the States, Territories, and countries shown herein via the Portland, Ogden, and other junctions gateways for the months of Jan., Mar., May, July, Sept., and November, 1926—Continued

	North Carolina						North Dakota						Ohio					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.
Benton:																		
43. Lbr.							12- 488	1-30						19- 632				
Clackamas:																		
43. Lbr.							1- 40							3- 110				
Coos:																		
43. Lbr.														9- 278				
44. Other														1- 30				
Douglas:																		
40. Logs														1- 27				
41. Ties														1- 40				
43. Lbr.		2- 60					7- 232						1- 40	15- 454				
Jackson:																		
43. Lbr.														22- 660				
Klamath:																		
43. Lbr.			9-219											68- 1,738	7-173			
Lane:																		
40. Logs														1- 33				
43. Lbr.		1- 19					44-1,575						6-217	62- 2,133				
Lincoln:																		
43. Lbr.		3-120					4- 142							46- 1,740				
Linn:																		
43. Lbr.							5- 170							7- 207				
Marion:																		
43. Lbr.							16- 585						4-145	20- 714				
Multnomah:																		
43. Lbr.														9- 220				
Polk:																		
43. Lbr.							5- 160						3-105	30- 1,111				
2567 Tillamook:																		
43. Lbr.							1- 40							13- 418				
Washington:																		
40. Logs							1- 33											
43. Lbr.		1- 23					11- 359							23- 658				
Yamhill:																		
40. Logs							3- 90											
43. Lbr.							5- 175							7- 260				
Total		7-222	9-219				118-4,049	1-30					14-507	357-11,463	7-173			

	Oklahoma						Pennsylvania						Rhode Island					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland	Ogden	Other jcts.	Portland	Ogden	Other jcts.	Portland	Odgen	Other jcts.	Portland	Ogden	Other jcts.	Portland	Ogden	Other jcts.	Portland	Ogden	Other jcts.
Benton:																		
43. Lbr	4-129	21- 781						2- 71						1- 23				
Coos:																		
43. Lbr		5- 110						8- 218										
Douglas:																		
43. Lbr	5-160	18- 622					2- 55	2- 58										
Jackson:																		
43. Lbr		1- 30						15- 450										
Josephine:																		
43. Lbr								1- 30										
Klamath:																		
43. Lbr		26- 752	41-1, 036					97-2, 475	5-104					8-210				
Lane:																		
40. Logs								2- 52										
43. Lbr	3- 90	113- 3, 979	1- 40				1- 30	29- 957						2- 49				
44. Other								1- 17										
Lincoln:																		
43. Lbr	2- 60	21- 744						3- 100						4-160				
44. Other								1- 17										
Linn:																		
43. Lbr	3-101	9- 181					2- 60											
Marion:																		
43. Lrb	6-229	80- 3, 009	1- 40				4-124	23- 905										
Multnomah:																		
43. Lbr		2- 70	1- 30											2- 39				
Polk:																		
43. Lbr		7- 261						2- 60										
2568 Tillamook:																		
43. Lbr		15- 585						4- 120										
Washington:																		
43. Lbr	1- 40	25- 721					3-103	15- 490										
Yamhill:																		
43. Lbr	1- 40	13- 466					8-256	3- 72										
Total	25-849	354-12, 311	44-1, 146				20-658	208-6, 092	5-104					17-481				

Statement showing the total carloads and total tons of forest products (with commodity segregations) moving between points on the lines of The Southern Pacific Company in Oregon situated in the various counties named and the States, Territories, and countries shown herein via the Portland, Ogden, and other junctions gateways for the months of Jan., Mar., May, July, Sept., and November, 1926—Continued

	South Carolina						South Dakota						Tennessee					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.
Benton:																		
43. Lbr.							18- 716											
Clackamas:																		
40. Logs							1- 22											
43. Lbr.							7- 240											
Coos:																		
43. Lbr.							5- 175											
Douglas:																		
43. Lbr.							15- 467											
Jackson:																		
43. Lbr.														1- 30				
Klamath:																		
43. Lbr.			1-25					1-26						11-293				
Lane:																		
43. Lbr.							82- 2,995	1-30										
Lincoln:																		
43. Lbr.							23- 843											
Linn:																		
43. Lbr.							15- 522											
Marion:																		
43. Lbr.							46- 1,619										3-99	4-127
Multnomah:																		
43. Lbr.																		
Polk:																		
43. Lbr.							11- 400											
Tillamook:																		
43. Lbr.							4- 145											
Washington:																		
43. Lbr.							25- 883											
Yamhill:																		
43. Lbr.							23- 850											
Total			1-25				275-10,077	2-56						12-323			3-99	4-127

2568	Texas						Utah						Vermont					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland	Ogden	Other junets.	Portland	Ogden	Other junets.	Portland	Ogden	Other junets.	Portland	Ogden	Other junets.	Portland	Ogden	Other junets.	Portland	Ogden	Other junets.
Benton:																		
43. Lbr.	28- 979	3- 96	11- 411				3- 120	11- 423										
Clackamas:																		
41. Ties.								6- 230										
43. Lbr.	2- 70		1- 30				2- 60	2- 70										
Coos:																		
40. Logs.							6- 190											
43. Lbr.	9- 262		3- 110					1- 30										
Douglas:																		
40. Logs.								1- 30										
41. Ties.							1- 43	9- 360										
43. Lbr.	26- 859	9- 313	21- 657				1- 35	8- 258						1- 18				
Jackson:																		
41. Ties.								1- 53										
43. Lbr.	2- 60	2- 50	2- 45				2- 60	1- 30										
Klamath:																		
43. Lbr.		21- 527	251- 6, 410					1- 27						3- 74				
Lane:																		
40. Logs.			2- 50				1- 23	2- 53										
41. Ties.							8- 223	113- 4, 341										
43. Lbr.	131- 4, 946	58-1, 914	54- 1, 811				35-1, 274	269- 9, 708						2- 57				
Lincoln:																		
43. Lbr.	22- 780	10- 380	15- 525					5- 186						14-530				
Linn:																		
41. Ties.							4- 70	19- 732										
43. Lbr.	9- 320	3- 96	7- 211					9- 306										
Marion:																		
41. Ties.							2- 70	3- 120										
43. Lbr.	52- 1, 988	13- 470	28- 971				31-1, 120	89- 3, 170					1-40					
Multnomah:																		
43. Lbr.		3- 85	8- 245				2- 44	8- 214										
Polk:																		
41. Ties.							1- 30											
43. Lbr.	4- 170	3- 100	6- 183					5- 172										
Tillamook:																		
41. Ties.							3- 115	1- 35										
43. Lbr.	21- 805	19- 710	17- 586				8- 297	84- 3, 051										
Washington:																		
41. Ties.							1- 47	1- 33										
43. Lbr.	32- 1, 100	10- 313	17- 626				5- 147	25- 833										
Yamhill:																		
41. Ties.								5- 180										
43. Lbr.	23- 838	6- 179	5- 190				5- 190	11- 380										
Total.	380-13, 186	155-5, 253	448-13, 061				121-4, 358	681-25, 094					1-40	20-679				

Statement showing the total carloads and total tons of forest products (with commodity segregations) moving between points on the lines of the Southern Pacific Company in Oregon situated in the various counties named and the States, Territories, and countries shown herein via the Portland, Ogden, and other junctions gateways for the months of Jan., Mar., May, July, Sept., and November, 1926—Continued.

2570	Virginia						West Virginia						Wisconsin					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.
Benton:																		
43. Lbr.	7-280							1- 35					17- 604	28- 881				
44. Other				1-14														
Clackamas:																		
43. Lbr.													6- 220	12- 460				
Coos:													1- 26					
40. Logs														15- 454				
43. Lbr.		1- 25						1- 39										
Douglas:													13- 453	24- 625				
43. Lbr.																		
Jackson:													12- 360	63- 1,390				
43. Lbr.																		
Klamath:													1- 27	487-12,717	3-77			
43. Lbr.		8-225	2-55					8-193	3-68									
Lane:													35-1,333	146- 5,098				
43. Lbr.								5-169										
Lincoln:													11- 368	80- 2,821				
43. Lbr.		3-100																
Linn:													4- 144	11- 337				
43. Lbr.																		
Marion:													22- 840	33- 1,140				
43. Lbr.		2- 60						7-280										
Multnomah:														2- 90		2-73		
43. Lbr.		6-169			1-30			8-205			1-37							
Polk:														25- 900				
43. Lbr.		2- 70																
Tillamook:													9- 290	13- 395				
43. Lbr.		3- 95						1- 19										
Washington:													2- 82	18- 579				
43. Lbr.		1- 22																
Yamhill:													3- 100	12- 415				
43. Lbr.																		
Total	7-280	26-706	2-55	1-14	1-30			31-940	3-68		1-37		130-4,847	969-28,312	3-77	2-73		

2571

	Wyoming						Mexico—Gulf coast						Europe via Atlantic ports					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.
Benton:																		
41. Ties	2- 76	1- 32																
43. Lbr	8- 314	4- 167							3- 104									
Clackamas:																		
43. Lbr	2- 80	2- 70							1- 20									
Coos:																		
40. Logs	42-1, 305																	
43. Lbr	1- 40																	
Douglas:																		
41. Ties	1- 40																	
43. Lbr	6- 186	3- 86																
Jackson:																		
43. Lbr														24-440				
Lane:																		
40. Logs	1- 25																	
41. Ties		1- 30																
43. Lbr	41-1, 498	28- 912						2-65	22- 673									
Lincoln:																		
43. Lbr	4- 152	1- 30							1- 28									
Linn:																		
43. Lbr	8- 294								2- 69									
Marion:																		
43. Lbr	6- 241	7- 274							1- 28									
Multnomah:																		
43. Lbr									1- 26									
Polk:																		
43. Lbr	4- 160																	
Tillamook:																		
41. Ties		1- 35																
43. Lbr	3- 115	2- 70																
Washington:																		
43. Lbr	16- 531	11- 407							2- 56									
Yamhill:																		
43. Lbr	11- 414	2- 80																
Total	156-5, 477	63-2, 193						2-65	33-1, 004					24-440				

Statement showing the total carloads and total tons of forest products (with commodity segregations) moving between points on the lines of the Southern Pacific Company in Oregon situated in the various counties named and the States, Territories, and countries shown herein via the Portland, Ogden, and other junctions gateways for the months of Jan., Mar., May, July, Sept., and November, 1926—Continued.

	Canada—east of Winnipeg						West Indies—Cent. & Southern American via Gulf ports						Europe via Gulf ports					
	Eastbound			Westbound			Eastbound			Westbound			Eastbound			Westbound		
	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.
Coos:																		
43. Lbr	1- 41	5-139																
Douglas:																		
43. Lbr		1- 30																
2572 Jackson:																		
43. Lbr		1- 25																
Josephine:																		
43. Lbr		2- 80																
Klamath:																		
43. Lbr		9-212																
Lincoln:																		
43. Lbr	3-120	1- 30																
44. Other		1- 17																
Marion:																		
44. Other		1- 16																
Total	4-161	21-549																

	"Export" via Gulf ports					
	Eastbound			Westbound		
	Portland	Ogden	Other juncts.	Portland	Ogden	Other juncts.
Yamhill:						
43. Lbr			3-94			
Total			3-94			

Reference Southern Pacific Company special statement 265-A (1927).

OWING TO THE CHARACTER AND RELATIVE IMPORTANCE OF FOREST PRODUCTS, WE HAVE SEGREGATED SAME FROM ALL OTHER COMMODITIES, WHICH COMMODITY GROUP FOR THE MONTHS OF JANUARY, MARCH, MAY, JULY, SEPTEMBER, AND NOVEMBER, 1926, SHOWS THE FOLLOWING (TOTALS ARE ALSO SHOWN FOR THE 12 MONTHS OF 1926)

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Totals	Total forest products, all S. P. Co. territory in Oregon (16 counties)			Total forest products (excluding Klamath County)			Total forest products (Klamath County only)		
	Number of carloads	Number of tons	Avge. tons per car	Number of carloads	Number of tons	Avge. tons per car	Number of carloads	Number of tons	Avge. tons per car
Via Portland, eastbound (6 months)	2,756	100,829	36.59	2,755	100,802	36.59	1	27	27.00
Via Portland, westbound (6 months)	21	499	23.76	8	276	34.50	13	223	17.15
Total (6 months)	2,777	101,328	36.49	2,763	101,078	36.58	14	250	17.86
Via Ogden, eastbound (6 months)	10,015	326,253	32.58	7,918	272,296	34.39	2,097	53,957	25.73
Via Ogden, westbound (6 months)	6	198	33.00	6	198	33.00			
Total (6 months)	10,021	326,451	32.58	7,924	272,494	34.39	2,097	53,957	25.73
Via other junctions, eastbound (6 months)	779	21,439	27.52	244	8,134	33.34	535	13,305	24.87
Via other junctions, westbound (6 months)	16	519	32.44	16	519	32.44			
Total (6 months)	795	21,958	27.62	260	8,653	33.28	535	13,305	24.87
Grand total (forest products) (6 months)	13,593	449,737	33.09	10,947	382,225	34.92	2,646	67,512	25.51

DOUBLING THE FOREGOING WE OBTAIN FOR THE TWELVE-MONTH PERIOD THE FOLLOWING GRAND TOTAL OF FOREST PRODUCTS FOR ALL COUNTIES; ALL COUNTIES EXCLUDING KLAMATH; AND KLAMATH COUNTY ONLY, TO WIT

Grand total (forest products) (12 months)	27,186	899,474	33.09	21,894	764,450	34.92	5,292	135,024	25.51

Forest products—"Transcontinental"—Continued

OTHERWISE STATED, BY GROUPING BOTH EASTBOUND AND WESTBOUND TONNAGE VIA THE PORTLAND, OGDEN, AND OTHER JUNCTIONS GATEWAYS, WE HAVE TOTAL CARLOADS AND TONS OF FOREST PRODUCTS FOR (6 MONTHS) AND FOR THE TWELVE MONTHS OF 1926 AS FOLLOWS

	Number of carloads	Number of tons	Avge. tons per car	Number of carloads	Number of tons	Avge. tons per car	Number of carloads	Number of tons	Avge. tons per car
Totals via Portland (east and west), 6 months	2,777	101,328	36.49	2,763	101,078	36.58	14	250	17.86
Totals via Ogden (east and west), 6 months	10,021	326,451	32.58	7,924	272,494	34.39	2,097	53,957	25.73
Totals via other junctions (east and west), 6 months	795	21,958	27.62	260	8,653	33.28	535	13,305	24.87
Grand total (forest products) (6 months)	13,593	449,737	33.09	10,947	382,225	34.92	2,646	67,512	25.51
Grand total (forest products) (12 months)	27,186	899,474	33.09	21,894	764,450	34.92	5,292	135,024	25.51

AS A COMPANION STATEMENT TO THE FOREGOING FOREST PRODUCTS THERE FOLLOWS A SIMILAR CLASSIFICATION OF "ALL OTHER COMMODITIES" FOR CORRESPONDING PERIODS AS FOLLOWS

Totals, all other commodities (16 counties)	Number of carloads	Number of tons	Avge. tons per car	Number of carloads	Number of tons	Avge. tons per car	Number of carloads	Number of tons	Avge. tons per car
Via Portland, eastbound (6 months)	1,205	17,195	14.27	1,204	17,185	14.27	1	10	10.00
Via Portland, westbound (6 months)	1,119	28,306	25.30	1,104	28,011	25.37	15	295	19.67
Total (6 months)	2,324	45,501	19.58	2,308	45,196	19.58	16	305	19.06
Via Ogden, eastbound (6 months)	1,766	34,571	19.58	1,739	33,982	19.54	27	589	21.81
Via Ogden, westbound (6 months)	607	10,028	16.52	478	7,759	16.23	129	2,269	17.59
Total (6 months)	2,373	44,599	18.79	2,217	41,741	18.83	156	2,858	18.32
Via other junctions, eastbound (6 months)	196	3,800	19.39	175	3,312	18.93	21	488	23.24
Via other junctions, westbound (6 months)	207	3,092	14.94	191	2,744	14.37	16	348	21.75
Total (6 months)	403	6,892	17.10	366	6,056	16.55	37	836	22.59
Grand total, all other commodities (16 counties, 6 months)	5,100	96,992	19.02	4,891	92,993	19.01	209	3,999	19.13
Grand total, all other commodities (16 counties, 12 months)	10,200	193,984	19.02	9,782	185,986	19.01	418	7,998	19.13

Forest products—"Transcontinental"—Continued

2574 OWING TO WEIGHT VARIATIONS WE HAVE FURTHER SEGREGATED FOREST PRODUCTS TO SHOW THE NUMBER OF CARLOADS, THE NUMBER OF TONS, AND THE AVERAGE TONS PER CAR FOR EACH OF THE FOUR COMMODITY CLASSIFICATIONS COMPRISING THIS GENERAL GROUP AS FOLLOWS

[NOTE.—No figures shown for the commodity of pulpwood (commodity #42)]

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	Number of carloads	Number of tons	Avge. tons per car
Commodity classification #40, consisting of logs, posts, poles, and cordwood, totals the following via the several gateways:			
Logs, posts, poles, and cordwood via Portland, eastbound (6 months)	72	2,093	29.07
westbound (6 months)	10	174	17.40
Total (6 months)	82	2,267	27.65
Ogden, eastbound (6 months)	66	1,696	25.70
westbound (6 months)			
Total (6 months)	66	1,696	25.70
other junctions, eastbound (6 months)	3	90	30.00
westbound (6 months)	1	20	20.00
Total (6 months)	4	110	27.50
Grand total, logs, posts, poles, and cordwood (eastbound and westbound), 6 months	152	4,073	26.80
Grand total, logs, posts, poles, and cordwood (eastbound and westbound), 12 months	304	8,146	26.80
Commodity classification #41, consisting of ties:			
Ties via Portland, eastbound (6 months)	67	2,638	39.37
westbound (6 months)			
Total (6 months)	67	2,638	39.37
Ogden, eastbound (6 months)	210	8,050	38.33
westbound (6 months)			
Total (6 months)	210	8,050	38.33
Grand total, ties (eastbound and westbound) 6 months	277	10,688	38.58
Grand total, ties (eastbound and westbound) 12 months	554	21,376	38.58

Forest products—"Transcontinental"—Continued

OWING TO WEIGHT VARIATIONS WE HAVE FURTHER SEGREGATED FOREST PRODUCTS TO SHOW THE NUMBER OF CARLOADS, THE NUMBER OF TONS, AND THE AVERAGE TONS PER CAR FOR EACH OF THE FOUR COMMODITY CLASSIFICATIONS COMPRISING THIS GENERAL GROUP AS FOLLOWS—Continued.

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	Number of carloads	Number of tons	Avge. tons per car
Commodity classification #44, consisting of other products of forests:			
Other products of forests via Portland, eastbound (6 months)	2	30	15.00
" " " " " " westbound (6 months)	1	14	14.00
Total (6 months)	3	44	14.67
" " " " " Ogden, eastbound (6 months)	29	817	28.17
" " " " " " westbound (6 months)			
Total (6 months)	29	817	28.17
" " " " " other junctions, eastbound (6 months)	3	107	35.67
" " " " " " " westbound (6 months)			
Total (6 months)	3	107	35.67
Grand total, other forest products, eastbound and westbound (6 months)	35	968	27.66
Grand total, other forest products, eastbound and westbound (12 months)	70	1,936	27.66

2575 *Statement showing total cars and tons, all other commodities than forest products, between Douglas, Jackson, and Josephine Counties and eastern destinations via Portland, Ogden, and other junction gateways for the six months, January, March, May, July, September, Nov., 1926, with totals for the 12 mons. of 1926*

County	Trans-continental, eastbound, via—									Trans-continental, westbound, via—								
	Portland			Ogden			Other junctions			Portland			Ogden			Other junctions		
	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car	Cars	Tons	Avge. tons per car
Douglas (6 months)	654	6,891	10.54	176	3,793	21.55	9	90	10.00	79	2,106	26.66	23	249	10.83			
" (12 ")	1,308	13,782	10.54	352	7,586	21.55	18	180	10.00	158	4,212	26.66	46	498	10.83			
Jackson (6 months)	5	69	13.80	837	12,425	14.84	5	67	13.40	135	3,279	24.29	85	2,039	23.99	17	199	11.71
" (12 ")	10	138	13.80	1,674	24,850	14.84	10	134	13.40	270	6,558	24.29	170	4,078	23.99	34	398	11.71
Josephine (6 months)	8	80	10.00	41	557	13.59	1	10	10.00	23	486	21.13	5	52	10.40			
" (12 ")	16	160	10.00	82	1,114	13.59	2	20	10.00	46	972	21.13	10	104	10.40			

RECAPITULATION—ALL COMMODITIES, BY COMMODITY GROUPS, TRANS-CONTINENTAL, EASTBOUND AS AGAINST WESTBOUND—TOTALS, 6-MONTH AND 12-MONTH PERIODS, 1926

		Cars	Tons	Avge. tons per car			Cars	Tons	Avge. tons per car
Commodity 1-16, Agriculture	All eastbound	2,261	31,314	13.85	Commodity 40-44, Forests	All eastbound	13,550	448,521	33.10
" " "	All westbound	588	13,944	23.71	" " "	All westbound	43	1,216	28.28
" " "	Total east and west	2,849	45,258	15.89	" " "	Total east and west	13,593	449,737	33.09
Commodity 17-28, Livestock	All eastbound	14	192	13.71	Commodity 45-69, Mfgs. & misc.	All eastbound	888	23,950	26.97
" " "	All westbound	4	66	16.50	" " "	All westbound	1,089	15,590	14.32
" " "	Total east and west	18	258	14.33	" " "	Total east and west	1,977	39,540	20.00
Commodity 29-39, Mines	All eastbound	4	110	27.50	Grand total (6 months)		18,693	546,729	29.25
" " "	All westbound	252	11,826	46.93	Grand total (12 months)		37,386	1,093,458	29.25
" " "	Total east and west	256	11,936	46.63					

Statement showing total cars and tons, all other commodities than forest products, between Douglas, Jackson, and Josephine Counties and eastern destinations via Portland, Ogden, and other junction gateways for the six months, January, March, May, July, September Nov., 1926, with totals for the 12 mons. of 1926—Continued

SUMMARIZING, FROM THE FOREGOING FIGURES EMBRACING ALL TRAFFIC REPORTED FOR THE SIXTEEN COUNTIES (INCLUDING KLAMATH) SERVED BY THE SOUTHERN PACIFIC LINES AND OREGON POINTS ON OTHER LINES TRIBUTARY THERETO SHOWN

Item No.		Cars	%	Tons	%
(1)	S. P. local traffic intra and inter county in Oregon	109,766	43.16	3,959,748	50.09
(2)	S. P. Co. interstate traffic, intermediate territory (outbnd.)	32,186	12.66	859,348	10.87
(3)	S. P. Co. interstate traffic, intermediate territory (inbnd.)	15,014	5.90	357,506	4.52
(4)	S. P. Co. trans-cont. traffic eastbound	33,434	13.15	1,008,174	12.75
(5)	S. P. Co. trans-cont. traffic westbound	3,952	1.55	85,284	1.08
(6)	Total S. P. Co. traffic (origin & destination in Oregon)	194,352	.....	6,270,060	.....
(7)	From S. P. Co. to Oregon points on other roads (origin & destination in Oregon)	4,878	1.92	163,694	2.07
(8)	To S. P. Co. from Oregon points on other roads (origin & destination in Oregon)	33,366	13.20	1,029,960	13.03
(9)	Through trans-cont. traffic from short-line connections in Oregon	3,244	1.27	99,224	1.26
(10)	Total, Oregon points, other roads	41,688	.....	1,292,878	.....
(11)	S. P. Co., passing or "bridge" traffic, neither origin nor destination in Oregon but passing thru Oregon	18,276	7.19	[1] 342,498	4.33
(12)	Grand total accounted for (12 months)	254,316	100.00	7,905,436	100.00

GATEWAYS OF TRAFFIC SHOWN IN ITEMS 4, 5 AND 9 HEREIN

"Trans-continental" traffic	Cars	%	Tons	%
Via Ogden gateway	27,218	66.99	814,420	68.29
Via Portland gateway	10,924	26.89	318,004	26.66
Via other junctions gateway	2,488	6.12	60,258	5.05
Total	40,630	100.00	1,192,682	100.00

[1] Estimated S. P. Co. traffic, 1926.

Exhibit No. 27.

State of Oregon—Recapitulation—Large steam roads—Revenue freight carried in Oregon, large steam roads, Classes I and II, calendar years 1922 to 1926, inc.

Commodity	1926		1925		1924		1923		1922	
	Revenue freight originating on respondent's road within the State		Revenue freight originating on respondent's road within the State		Revenue freight originating on respondent's road within the State		Revenue freight originating on respondent's road within the State		Revenue freight originating on respondent's road within the State	
	No. of carloads	No. of tons (2,000 lbs.)	No. of carloads	No. of tons (2,000 lbs.)	No. of carloads	No. of tons (2,000 lbs.)	No. of carloads	No. of tons (2,000 lbs.)	No. of carloads	No. of tons (2,000 lbs.)
Products of agriculture:										
1. Wheat	10,882	443,864	8,109	322,926	9,682	396,398	10,842	455,158	10,291	433,716
2. Corn	30	834	24	649	37	962	22	636	27	813
3. Oats	645	18,377	559	15,727	880	25,336	866	25,175	671	18,993
4. Other grain	369	11,639	397	12,641	400	13,030	242	7,308	491	15,162
5. Flour and meal	2,972	91,024	2,537	80,472	2,274	73,124	2,734	94,451	2,346	72,833
6. Other mill products	3,106	78,883	2,850	72,089	2,865	71,623	2,929	73,319	2,706	65,255
7. Hay, straw, and alfalfa	3,271	45,809	4,610	64,710	4,388	60,533	4,608	61,463	5,340	73,646
8. Tobacco										
9. Cotton			1	19	(1)	10	3	40		
10. Cottonseed and products, except oil	14	352	23	474	5	133	2	85	9	260
11. Citrus fruits	32	427	66	833	65	816	79	1,010	78	1,215
12. Other fresh fruits	8,165	141,265	6,502	111,578	6,152	109,023	8,053	135,839	4,933	85,089
13. Potatoes	2,332	42,022	1,460	25,978	1,493	26,763	1,882	33,443	1,599	28,590
14. Other fresh vegetables	3,426	42,169	2,025	26,345	2,381	3,177	1,495	19,960	1,022	14,158
15. Dried fruits and vegetables	884	25,033	461	13,947	867	27,314	683	19,584	797	25,890
16. Other products of agriculture	1,114	20,094	1,109	19,878	997	17,222	841	14,944	548	8,715
Total	37,242	960,992	30,733	768,266	32,486	853,364	35,201	942,415	30,858	844,335

[1]No cars shown.

State of Oregon—Recapitulation—Large steam roads—Revenue freight carried in Oregon, large steam roads, Classes I and II, calendar years 1922 to 1926, inc.—Continued

Commodity	1926		1925		1924		1923		1922	
	Revenue freight originating on respondent's road within the State		Revenue freight originating on respondent's road within the State		Revenue freight originating on respondent's road within the State		Revenue freight originating on respondent's road within the State		Revenue freight originating on respondent's road within the State	
	No. of carloads	No. of tons (2,000 lbs.)	No. of carloads	No. of tons (2,000 lbs.)	No. of carloads	No. of tons (2,000 lbs.)	No. of carloads	No. of tons (2,000 lbs.)	No. of carloads	No. of tons (2,000 lbs.)
Animals and products:										
17. Horses and mules	750	8,697	393	4,668	421	4,930	313	3,619	341	3,917
18. Cattle and calves	5,042	58,852	5,055	60,001	5,755	68,840	5,307	62,279	5,173	60,166
19. Sheep and goats	4,604	48,479	5,101	54,479	5,084	53,432	4,883	50,011	5,465	57,713
20. Hogs	571	5,537	546	5,447	878	8,494	693	6,662	630	6,024
21. Fresh meats	793	10,343	800	10,507	663	8,708	462	6,173	364	5,187
22. Other packing-house products	173	2,802	260	4,112	341	5,157	542	7,776	366	5,202
23. Poultry	32	391	25	319	25	299	16	207	14	165
24. Eggs	369	4,891	299	3,877	210	2,716	160	2,039	154	1,839
25. Butter and cheese	284	4,376	211	3,306	235	3,615	197	3,125	163	2,458
26. Wool	527	7,157	422	6,047	671	9,529	529	7,609	642	9,723
27. Hides and leather	179	4,182	262	5,999	132	3,104	148	3,797	165	4,019
28. Other animals and products	251	5,353	248	5,244	268	5,642	184	4,042	183	3,497
Total	13,575	161,060	13,622	164,006	14,683	174,466	13,434	157,141	13,660	159,910
Products of mines:										
29. Anthracite coal			1	42	4	117				
30. Bituminous coal	199	7,227	217	7,429	220	7,924	430	13,394	785	30,999
31. Coke	15	505	6	162	3	64	8	230	13	329
32. Iron ore			143	9,342	1	48	3	115		
33. Other ores and concentrates	76	2,662	50	1,574	129	5,365	305	11,506	306	11,947
34. Base bullion and matte					2	60	1	55		
35. Clay, gravel, sand, and stone	6,221	338,968	7,209	391,857	6,851	366,766	7,788	401,821	8,990	473,968
36. Crude petroleum	122	4,665	76	3,004	35	1,441	386	14,806	229	8,430
37. Asphaltum	31	827	23	644	7	194	6	173	51	1,502
38. Salt	219	5,378	166	4,018	24	527	18	385	23	518
39. Other products of mines	295	12,357	216	9,091	193	8,009	145	5,444	124	5,155
Total	7,178	372,589	8,107	427,163	7,469	390,515	9,090	447,929	10,521	532,848

2577 Products of forests:										
40. Logs, posts, poles, and cordwood	110,809	3,910,519	124,533	4,067,228	96,073	3,110,668	116,313	3,652,614	91,327	2,776,333
41. Ties	1,674	65,745	1,829	74,421	2,361	92,673	3,717	145,646	2,387	89,390
42. Pulpwood	3,185	137,424	2,923	120,958	2,104	87,140	2,070	81,675	1,552	63,246
43. Lumber, timber, box shooks, staves, and headings	100,804	2,912,097	96,720	2,819,104	87,892	2,582,811	88,958	2,666,588	69,456	2,086,805
44. Other products of forests	406	6,648	448	6,093	617	12,314	236	3,780	450	11,818
Total	216,878	7,032,433	226,453	7,087,804	189,047	5,885,606	211,294	6,550,303	165,172	5,027,592
Manufactures and miscellaneous:										
45. Refined petroleum and its products	6,758	214,500	5,827	182,158	5,418	172,217	4,520	136,533	2,818	79,142
46. Vegetable oils	847	25,367	611	18,807	836	25,019	526	15,444	473	14,060
47. Sugar, sirup, glucose, and molasses	959	23,295	565	13,598	83	1,956	47	1,118	39	984
48. Boat and vessel supplies	5	66	15	89	14	75	14	82	9	130
49. Iron, pig and bloom	14	681	6	290	5	158	15	505	11	372
50. Rails and fastenings	296	11,364	177	6,470	211	7,642	353	12,996	243	7,687
51. Bar and sheet iron, structural iron, and pipe iron	734	17,870	607	14,306	546	13,173	493	13,039	448	11,145
52. Other metals, pig, bar, and sheet	8	275	20	734	22	649	34	1,354	24	879
53. Castings, machinery, and boilers	787	16,152	753	15,272	836	17,807	1,175	24,804	840	17,052
54. Cement	3,962	160,472	4,305	168,824	3,819	162,104	2,283	99,738	2,336	101,516
55. Brick and artificial stone	610	18,902	659	21,578	571	18,284	551	18,299	415	13,157
56. Lime and plaster	155	3,886	179	4,983	409	13,210	419	13,927	579	18,887
57. Sewer pipe and drain tile	348	6,280	461	8,493	332	6,121	286	5,030	369	6,711
58. Agricultural implements and vehicles other than automobiles	233	3,664	394	5,159	444	6,141	399	5,885	440	6,643
59. Automobiles and auto trucks	1,088	9,003	1,475	9,667	1,342	8,459	1,661	10,182	534	3,526
60. Household goods and second hand furniture	298	3,132	349	3,779	398	4,216	487	5,102	504	7,627
61. Furniture (new)	453	4,168	489	4,463	429	3,808	353	3,123	259	2,298
62. Beverages	96	1,791	117	2,195	111	2,081	137	2,703	128	2,655
63. Ice	466	13,800	201	5,339	252	7,641	972	29,753	364	11,531
64. Fertilizers (all kinds)	413	13,168	375	11,378	231	7,350	242	7,916	226	6,924
65. Paper, printed matter, and books	914	22,387	1,329	31,803	815	18,809	163	3,882	166	4,071
66. Chemicals and explosives	241	5,538	174	3,703	136	3,048	126	3,261	113	3,134
67. Textiles	5	103	4	68	2	46	7	118	8	129
68. Canned goods (all canned food products)	2,844	82,328	2,783	81,036	2,486	70,139	2,147	61,604	1,993	58,672
69. Other manufactures and miscellaneous	10,566	202,984	9,478	182,983	8,981	172,453	9,214	182,973	8,184	163,323
Total	33,130	861,176	31,353	797,175	28,729	742,586	26,624	659,371	21,523	542,255
Grand total, carload traffic	308,003	9,388,250	310,268	9,244,414	272,414	8,046,537	295,643	8,757,359	241,734	7,106,940
70. All l. c. l. freight		241,187		263,989		274,865		293,506		273,237
Grand total, carload and l. c. l. traffic		9,629,437		9,508,403		8,321,402		9,050,865		7,380,177
All other revenue freight carried within the State:										
Grand total, carload traffic	369,792		338,871		325,669		346,175		283,134	
Grand total, c/l and l. c. l. traffic		10,280,098		9,522,613		9,332,676		9,750,082		8,281,345
Total revenue freight carried within the State:										
Grand total, carload traffic	677,795		649,139		598,083		641,818		524,868	
Grand total, c/l and l. c. l. traffic		19,909,535		19,031,016		17,654,078		18,800,947		15,661,522

2578 *Grand recapitulation—Total tons of revenue freight originating in Oregon, calendar years 1922 to 1926, inc.*

	Calendar year	Products of agriculture	Animals and products	Products of mines	Products of forests	Manufactures and miscellaneous	All l. c. l. freight	Total (tons, 2,000 lbs.)
Group I: 10 large steam railroads.	1926	960,992	161,060	372,589	7,032,433	861,176	241,187	9,629,437
	1925	768,266	164,006	427,163	7,087,804	797,175	263,989	9,508,403
	1924	853,364	174,466	390,515	5,885,606	742,586	274,865	8,321,402
	1923	942,415	157,341	447,929	6,550,303	659,371	293,506	9,050,865
	1922	844,335	159,910	532,848	5,027,592	542,255	273,237	7,380,177
Group II: 21 small steam railroads.	1926	75,503	5,614	87,771	4,410,543	22,922	6,288	4,608,641
	1925	46,433	5,465	80,363	3,744,228	26,447	2,828	3,905,784
	1924	84,060	6,804	85,098	3,045,361	28,672	2,633	3,252,328
	1923	68,078	5,493	19,460	2,224,374	39,256	2,376	2,359,037
	1922	63,911	3,505	1,136	1,674,952	45,042	2,961	1,791,507
Totals, Groups I and II, 31 steam railroads.	1926	1,036,495	166,674	460,360	11,442,976	884,098	247,475	14,238,078
	1925	814,699	169,471	507,526	10,832,032	823,622	266,817	13,414,187
	1924	937,424	181,270	475,613	8,930,967	771,258	277,498	11,574,030
	1923	1,010,493	162,834	467,389	8,774,677	698,627	295,882	11,409,902
	1922	908,246	163,715	533,984	6,702,544	587,297	276,198	9,171,984
Group III: 10 electric roads	1926	Tonnage statistics not available.						
	1925							
	1924							
	1923							
	1922							

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Name of road	Miles of road owned at close of year	Miles of road operated at close of year	All tracks, total line operated at close of year (miles)	Per cent of grand total
Astoria Southern Railway	10.00	13.50	16.50	0.32
Benson Timber Company	7.34	7.34	7.34	0.14
Calif. & Ore. Coast R. R.	14.61	14.61	16.09	0.31
Carlton & Coast R. R.	13.93	13.93	16.55	0.32
Central R. R. of Oregon	16.36	16.36	17.47	0.33
City of Prineville R. R.	18.30	18.30	19.35	0.37
Cochran & Southern Log R. R.	4.00	4.00	4.00	0.08
Gales Creek & Wilson River	12.76	12.76	14.97	0.28
Great Northern Railway		9.76	55.04	1.03
Great Southern Railroad	40.69	40.69	44.32	0.85
K. P. Timber Company	31.00	31.00	35.00	0.67
Lewis & Clark Railroad	18.00	18.00	24.00	0.46
Medford Logging R. R.	32.00	32.00	35.00	0.67
Mt. Hood Railroad	22.20	22.20	24.84	0.47
Nev.-Calif.-Ore. Ry.	14.71	14.71	15.61	0.30
Northern Pacific Ry.	50.29	54.74	75.10	1.44
Northern Pac. Terminal Co.			36.99	0.71
Ore.-Calif. & Eastern Ry.	40.00	40.00	48.01	0.92
Ore.-Pacific & Eastern Ry.	23.63	23.63	28.18	0.54
Oregon Short Line R. R.	33.94	271.73	323.96	6.19
Ore.-Wash. R. R. & Nav. Co.	771.35	922.57	1,274.45	24.38
Oregon Trunk Railway	127.20	151.19	177.98	3.40
Pac. States Lumber Co.	18.56	43.96	48.50	0.93
Portland & Southwestern R. R.	10.77	10.77	12.55	0.24
Southern Pacific Co.	502.11	1,408.14	1,813.83	34.67
S. P. & S. Railway	88.28	128.00	199.19	3.81
Sumpter Valley Railway	79.63	79.63	98.68	1.89
United Railways Company	52.27	54.79	82.59	1.58
Valley & Siletz	40.60	40.60	46.93	0.90
Willamette Val. & Coast R. R.	5.40	5.40	6.00	0.11
Willamina & Grand Rond Ry.	8.76	8.76	10.67	0.20
Total (31 steam roads)	2,108.69	3,513.06	4,629.69	88.51
Kenton Traction Co.	3.92		4.02	0.08
Oregon Electric Ry.	192.10		204.55	3.91
Portland & Troutdale E. Ry.	1.50		1.50	0.03
Portland Elec. Power Co., city lines	190.07		200.81	3.84
Portland Elec. Power Co., interurban lines	113.49		114.31	2.19
S. P. Co., st. ry., Eugene	14.64		14.64	0.28
S. P. Co., st. ry., Salem	4.35		4.35	0.08
S. P. Co., st. ry., West Linn	8.31		8.31	0.16
Walla Walla Valley Ry.	10.74		12.81	0.24
Willamette Val. So. Ry.	35.99		35.99	0.69
Total (10 electric lines)	571.11		601.29	11.49
Grand total (steam & electric)			5,230.98	100.00

2580 *State of Oregon—Recapitulation—Ten [1] large steam roads (Classes I and II), revenue freight carried in Oregon*

[Columns showing carloads and tons opposite commodities represent the revenue freight originated by these 10 roads in Oregon during the year 1926. Totals at bottom of each commodity group are comparative totals for the five years, 1922 to 1926, inclusive. Percentages relate to all tonnage originated for year indicated.]

Commodity	Year 1926, revenue freight originating on respondent's road within the State			
	No. of carloads	No. of tons	Per cent of total	Per cent of total for year indicated
Products of agriculture:				
1. Wheat	10,882	443,864	4.61	
2. Corn	30	834	0.01	
3. Oats	645	18,377	0.19	
4. Other grain	369	11,639	0.12	
5. Flour and meal	2,972	91,024	0.95	
6. Other mill products	3,106	78,083	0.81	
7. Hay, straw, and alfalfa	3,271	45,809	0.48	
8. Tobacco				
9. Cotton				
10. Cottonseed and products except oil	14	352	0.004	
11. Citrus fruits	32	427	0.004	
12. Other fresh fruits	8,165	141,265	1.47	
13. Potatoes	2,332	42,022	0.44	
14. Other fresh vegetables	3,426	42,169	0.44	
15. Dried fruits and vegetables	884	25,033	0.26	
16. Other products of agriculture	1,114	20,094	0.21	
Total, year 1926	37,242	960,992		9.99
" " 1925	30,733	768,266		8.08
" " 1924	32,486	853,364		10.26
" " 1923	35,201	942,415		10.41
" " 1922	30,858	844,355		11.44
Animals and products:				
17. Horses and mules	750	8,697	0.09	
18. Cattle and calves	5,042	58,852	0.61	
19. Sheep and goats	4,604	48,479	0.50	
20. Hogs	571	5,537	0.06	
21. Fresh meats	703	10,343	0.11	
22. Other packing-house products	173	2,802	0.03	
23. Poultry	32	391	0.004	
24. Eggs	369	4,891	0.05	
25. Butter and cheese	284	4,376	0.05	
26. Wool	527	7,157	0.07	
27. Hides and leather	179	4,182	0.04	
28. Other animals and products	251	5,353	0.06	
Total, year 1926	13,575	161,060		1.67
" " 1925	13,622	164,006		1.73
" " 1924	14,683	174,466		2.10
" " 1923	13,434	157,341		1.74
" " 1922	13,660	159,910		2.17
2581 Products of mines:				
29. Anthracite coal				
30. Bituminous coal				
31. Coke	199	7,227	0.08	
32. Iron ore	15	505	0.005	
33. Other ores & concentrates	76	2,662	0.03	
34. Base bullion and matte				
35. Clay, gravel, sand, and stone	6,221	338,968	3.52	
36. Crude petroleum	122	4,665	0.05	
37. Asphaltum	31	827	0.009	
38. Salt	219	5,378	0.06	
39. Other products of mines	295	12,357	0.13	
Total, year 1926	7,178	372,589		3.88
" " 1925	8,107	427,163		4.49
" " 1924	7,469	390,515		4.69
" " 1923	9,090	447,929		4.95
" " 1922	10,521	532,848		7.22

[1] Ten roads embraced in the foregoing figures are:
Great Northern Railway.
Nevada-California-Oregon Railway.
Northern Pacific Railway.
Oregon Short Line Railroad.
Oregon Trunk Railway.
Oregon-Washington & Navigation Company.
Southern Pacific Company.
Spokane-Portland & Seattle Railway.
Sumpter Valley Railway.
Valley and Siletz Railroad.

State of Oregon—Recapitulation—Ten large steam roads (Classes I and II), revenue freight carried in Oregon—Continued

Commodity	Year 1926, revenue freight originating on respondent's road within the State			
	No. of carloads	No. of tons	Per cent of total	Per cent of total for year indicated
Products of forests:				
40. Logs, posts, poles, and cordwood	110,809	3,910,519	40.61	
41. Ties	1,674	65,745	0.68	
42. Pulpwood	3,185	137,424	1.43	
43. Lumber, timber, box shooks, staves, and headings	100,804	2,912,097	30.24	
44. Other products of forests	408	6,648	0.07	
Total, year 1926	216,878	7,032,433		73.03
" " 1925	226,453	7,087,804		74.54
" " 1924	189,047	5,885,606		70.08
" " 1923	211,294	6,550,303		73.37
" " 1922	165,172	5,027,592		68.12
Manufactures and miscellaneous:				
45. Refined petroleum & prods	6,758	214,500	2.23	
46. Vegetable oils	847	25,367	0.26	
47. Sugar, sirup, glucose, & molasses	959	23,295	0.24	
48. Boats & vessel supplies	5	66	0.0006	
49. Iron, pig, & bloom	14	681	0.01	
50. Rails and fastenings	296	11,384	0.13	
51. Bar & sheet iron, structural iron, and pipe iron	734	17,870	0.19	
52. Other metals, pig, bar, & sheet	8	275	0.003	
53. Castings, machinery, & Boilers	787	16,152	0.17	
54. Cement	3,962	160,472	1.67	
55. Brick & artificial stone	610	18,902	0.20	
56. Lime and plaster	155	3,886	0.04	
57. Sewer pipe and drain tile	348	6,280	0.07	
58. Agr. implements & vehicles other than automobiles	263	3,664	0.04	
59. Autos and auto trucks	1,088	9,003	0.09	
60. H. H. goods & 2nd-hand furniture	298	3,132	0.03	
61. Furniture (new)	453	4,168	0.04	
62. Beverages	96	1,791	0.02	
63. Ice	466	13,800	0.14	
64. Fertilizers (all kinds)	413	13,168	0.14	
65. Paper, printed matter, & books	914	22,387	0.23	
66. Chemicals & explosives	241	5,538	0.06	
67. Textiles	5	103	0.001	
68. Canned goods (all canned food prods.)	2,844	82,328	0.85	
69. Other mfgs. & misc	10,566	202,984	2.03	
Total, year 1926	33,130	861,176		8.94
Total, " 1925	31,353	797,175		8.38
" " 1924	28,729	742,586		8.92
" " 1923	26,624	659,371		7.39
" " 1922	21,523	542,255		7.31

State of Oregon—Recapitulation—Ten large steam roads (Classes I and II), revenue freight carried in Oregon—Continued

2582	Cars	Tons	%
Grand total, carload traffic, year 1926	308,003	9,388,250	97.50
" " " " " 1925	310,268	9,244,514	97.22
" " " " " 1924	272,414	8,046,537	96.70
" " " " " 1923	295,643	8,757,359	96.76
" " " " " 1922	241,734	7,106,940	96.30
70. All l. c. l. freight, year 1926		241,187	2.51
" " " " 1925		263,989	2.78
" " " " 1924		274,865	3.30
" " " " 1923		293,506	3.24
" " " " 1922		273,237	3.70
Grand total, carload & l. c. l. traffic, year 1926		9,629,437	100.00
" " " " " " " 1925		9,508,403	100.00
" " " " " " " 1924		8,321,402	100.00
" " " " " " " 1923		9,050,865	100.00
" " " " " " " 1922		7,380,177	100.00
All other revenue freight carried within the State:			
Grand total carload traffic, year 1926	369,792		
" " " " " 1925	338,871		
" " " " " 1924	325,669		
" " " " " 1923	346,175		
" " " " " 1922	283,134		
Grand total c/l & l. c. l. traffic, year 1926	10,280,098		
" " " " " " " 1925	9,522,613		
" " " " " " " 1924	9,332,676		
" " " " " " " 1923	9,750,082		
" " " " " " " 1922	8,281,345		
Total revenue freight carried within the State:			
Grand total carload traffic, year 1926	677,795		
" " " " " 1925	649,139		
" " " " " 1924	598,083		
" " " " " 1923	641,819		
" " " " " 1922	524,868		
Grand total c/l & l. c. l. traffic, year 1926		19,909,535	
" " " " " " " 1925		19,031,016	
" " " " " " " 1924		17,654,078	
" " " " " " " 1923		18,800,947	
" " " " " " " 1922		15,661,522	

2583 It will be noted that the total total tonnage originated within the State on the lines of the 31 steam carriers increased yearly from 9,171,984 tons in 1922 to 14,238,078 tons in 1926, an increase of 5,066,094 tons, or 35.58%. This total tonnage, computed on a five-year basis, is 7.87% agriculture, 1.41% livestock, 4.09% mines, 78.05% forests, 6.29% mfgrs. & misc., 2.28% l. c. l. mdse.

Similar statistics covering the electric lines are not available.

Likewise the annual reports for small steam carriers do not carry full commodity statistics to enable the segregation of logs, posts, poles, and cordwood from all other commodities embraced in the 70-commodity classification of the large steam roads, but owing to the relatively heavy log tonnage there follows the total cars and total tons of logs compared to other commodities comprising "forest products" for the years 1922 to 1926, inclusive.

Commodity No.		Cars	Tons
	1926		
40	Logs, posts, poles, & cordwood	110,804	3,910,819
41	Ties	1,674	65,745
42	Pulpwood	3,185	137,426
43	Lumber, timbers, box shooks, staves, and headings	100,804	2,912,097
44	Other products of forests	406	6,648
	Total	216,878	7,032,433
	1925		
40	Logs, posts, poles, & cordwood	142,533	4,067,228
41	Ties	1,829	74,421
42	Pulpwood	2,923	120,998
43	Lumber, timbers, box shooks, staves, and headings	96,720	2,819,104
44	Other products of forests	448	6,053
	Total	226,453	7,087,804
	1924		
40	Logs, posts, poles, & cordwood	96,073	3,110,668
41	Ties	2,361	92,673
42	Pulpwood	2,104	87,140
43	Lumber, timbers, box shooks, staves, and headings	87,892	2,582,811
44	Other products of forests	617	12,314
	Total	189,047	5,885,606
	1923		
40	Logs, posts, poles, & cordwood	116,313	3,652,614
41	Ties	3,717	145,646
42	Pulpwood	2,070	81,675
43	Lumber, timbers, box shooks, staves, and headings	88,958	2,666,368
44	Other products of forests	236	3,780
	Total	211,294	6,550,303
	1922		
40	Logs, posts, poles, & cordwood	91,327	2,776,333
41	Ties	2,387	89,390
42	Pulpwood	1,552	63,246
43	Lumber, timbers, box shooks, staves, and headings	69,456	2,066,805
44	Other products of forests	450	11,818
	Total	165,172	5,027,592

2585 *Statement showing total cars and total tons of revenue freight carried by the Oregon-Washington Railroad and Navigation Company in Oregon for the calendar year 1926; also memorandum of freight traffic forwarded from and received at stations on various branches of the Oregon-Washington Railroad and Navigation Company in Oregon for the calendar year 1926, with notes showing approximate percentage of tonnage forwarded from and received at the principal stations*

Year 1926, O. W. R. & N. CO.	Total		Local		Forwarded									
					Intra system						Interline			
					U. P.		O. S. L.		L. A. & S. L.		Eastbound		Westbound	
	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons
Deschutes br	5,615	142,138	816	15,621	488	12,811	210	4,237	53	1,366	3,511	93,856	537	14,247
Shaniko br	1,722	65,469	695	23,952	-----	-----	3	35	-----	-----	18	207	1,006	41,275
Condon br	1,098	33,463	567	15,487	5	89	10	120	-----	-----	37	460	479	17,307
Heppner br	1,448	45,529	620	15,239	48	553	28	323	-----	-----	36	474	716	28,940
Pilot Rock br	687	18,931	359	8,077	10	116	23	263	-----	-----	22	292	273	10,183
Joseph br	9,894	314,989	6,109	208,384	423	9,349	87	1,847	7	184	2,391	60,389	877	34,836
Total	20,464	620,519	9,166	286,760	974	22,918	361	6,825	60	1,550	6,015	155,678	3,888	146,788
					Received									
Deschutes br	938	26,010	726	20,286	29	1,233	7	185	1	61	59	1,189	116	3,056
Shaniko br	548	20,883	347	12,901	23	909	1	18	-----	-----	107	4,582	70	2,473
Condon br	377	11,240	248	7,808	11	361	2	41	-----	-----	43	707	73	2,323
Heppner br	443	15,725	288	9,415	16	597	1	25	-----	-----	69	1,593	99	4,095
Pilot Rock br	371	16,149	313	14,038	12	647	4	68	(?)	52	13	430	29	914
Joseph br	1,316	39,412	887	24,514	115	5,190	33	657	-----	-----	52	1,166	229	7,885
Total	3,993	129,419	2,779	88,962	206	8,937	48	994	1	113	343	9,667	616	20,746
					Recapitulation									
Deschutes br	6,553	168,148	1,542	35,907	517	14,044	217	4,422	54	1,427	3,570	95,045	653	17,303
Shaniko br	2,270	86,352	1,042	36,853	23	909	4	53	-----	-----	125	4,789	1,076	43,748
Condon br	1,475	44,703	815	23,295	16	450	12	161	-----	-----	80	1,167	552	19,630
Heppner br	1,891	61,254	878	24,654	64	1,150	29	348	-----	-----	105	2,067	815	33,035
Pilot Rock br	1,058	35,080	672	22,115	22	763	27	331	(?)	52	35	722	302	11,097
Joseph br	11,210	354,401	6,996	232,898	538	14,539	120	2,504	7	184	2,443	61,555	1,106	42,721
Grand total	24,457	749,938	11,945	375,722	1,180	31,855	409	7,819	61	1,663	6,358	165,345	4,504	167,534

Total cars and tons of revenue freight carried by O. W. R. & N. Co. in Oregon in 1928

	Revenue freight originating on respondent's road within the State				All other revenue freight carried within the State				Total revenue freight carried within the State			
	Cars	%	Tons	%	Cars	%	Tons	%	Cars	%	Tons	%
Products of agriculture	19,578	26.66	583,875	27.20								
Animals and products	5,444	7.41	63,313	2.95								
Products of mines	2,419	3.29	126,417	5.89								
Products of forests	33,067	45.04	1,030,701	48.01								
Manufactures & miscellaneous	12,916	17.59	342,678	15.96								
Grand total, carload traffic	73,424	100.00	2,146,984	100.00	105,928				179,352			
All l. c. l. freight			85,115									
Grand total, carload and l. c. l. traffic			2,232,099				3,135,687				5,367,786	

Reference: O. W. R. & N. Co. Auditing Department 1927 and Annual Reports to P. S. C. Or.

Approximate percentage of tonnage forwarded from and received at the principal stations on the branches named herein

O. W. R. & N. CO.

	Forwarded	Received		Forwarded	Received
Deschutes branch:			Heppner branch:		
Maupin, Oregon	7.61%	2.26%	Ione, Oregon	15.41%	21.81%
Madras, "	5.36	.77	Jordan, "	9.55	
Terrebonne, Oregon	7.59	1.22	Lexington, "	25.71	11.24
Redmond, "	11.65	2.51	Heppner, "	40.39	62.96
Bend, "	60.10	87.40	Pilot Rock branch:		
Shaniko branch:			Sparks, Oregon	17.04%	79.47%
Wasco, Oregon	18.49%	39.45%	Pilot Rock, "	72.60	20.37
Hay Canyon, "	15.90	1.40	Joseph branch:		
Moro, "	11.08	18.14	Island City, Oregon	2.34%	10.29%
Grass Valley, "	14.66	16.56	Elgin, "	3.42	13.14
Shaniko, "	7.54	11.74	Wallowa, "	68.06	35.74
Condon branch:			Enterprise, "	13.89	30.00
Shutler, Oregon	4.00%	5.75%			
Mikkalo, "	8.18?	3.67			
Clem, "	7.49	2.05			
Condon, "	74.92	83.96			

NOTE: The above branches representing O. W. R. & N. Co. branch line operations in Oregon account for the origination of 20,464 carloads totaling 620,519 tons.

Using the 1926 Annual Report figures as a basis, would leave 52,960 carloads totaling 1,526,465 tons as originating on the remaining lines of the O. W. R. & N. Co. in Oregon.

Bearing in mind possible differences in compilation of the branch line statements and the Annual Report figures, this shows the former to represent 27.87% of the carloads and 28.9% of traffic originating in Oregon.

2586 EASTERN OREGON TRAFFIC

Eastern Oregon traffic or traffic generally designated as east of the Cascades and contiguous to proposed cross-State line is recorded in different sections of this report and accompanying exhibit.

As the following letter will show, statistics covering the lumber traffic from the Bend mills were secured for the calendar year 1926, and in addition thereto the writer personally abstracted from the records of these companies in Bend, Oregon, similar statistics for 1927 to the latest date available (Sept., 1927).

WESTERN PINE MANUFACTURERS ASSOCIATION,
Portland, Oregon, Sept. 16, 1927.

Mr. HAL F. WIGGINS,
Public Service Commission,
Salem, Oregon.

DEAR SIR: Our records show that the following lumber shipments were made from Bend, Oregon, during the calendar year 1926.

Shipments east thru Huntington, Oregon	3,410 cars.
Shipments to Oregon, Washington, California, Nevada, Arizona, Canada, & Export	520 "
Shipments east thru northern gateways (balance)	7,032 "
Total shipments, 1926	10,962 cars.

The attached table shows the detailed distribution of the shipments from Bend during 1926. These shipments include, in addition to the lumber shown, some lath and other material on which board-measure footage was not available.

Yours truly,

WESTERN PINE MANUFACTURERS ASSOCIATION.
S. J. S., *Statistician.*

SJS/ES.

2587 *Western Pine Manufacturers Association Portland, Oregon—Rail shipments of lumber from Bend, Oregon, during 1926*

Shipments of lumber into States named	Number of cars	Per cent of total cars	Number of feet, board measure	Shipments of lumber into States named	Number of cars	Per cent of total cars	Number of feet, board measure
Idaho	34	0.30	912,552	Rhode Island	58	0.53	1,573,357
Montana	2	0.02	51,837	Maine	29	0.30	804,791
Oregon	204	1.86	5,736,808	New Hampshire	21	0.20	632,061
Washington	112	1.02	3,056,290	Vermont	3	0.03	86,431
North Dakota	42	0.40	1,150,090	Delaware	14	0.10	405,740
South Dakota	67	0.60	1,733,698	Dist. Columbia	72	0.70	2,060,187
Minnesota	1,060	9.67	28,076,579	Maryland	61	0.60	1,698,044
Wisconsin	599	5.46	16,095,105	Virginia	7	0.06	182,724
Iowa	1,226	11.18	33,097,942	West Virginia	22	0.20	651,775
Illinois	671	6.12	18,532,100	Tennessee	1	0.01	25,608
Kansas	240	2.19	6,045,967	Kentucky	2	0.02	53,748
Nebraska	291	2.65	7,613,923	Oklahoma	63	0.60	1,718,269
Missouri	126	1.15	3,345,807	Texas	120	1.09	3,758,317
Colorado	299	2.73	7,820,013	California	171	1.56	4,975,174
Wyoming	80	0.70	2,183,368	Canada	14	0.10	362,348
Utah	307	2.80	7,953,099	Export	3	0.03	81,082
Michigan	989	9.02	27,918,009	Local			
Ohio	543	4.95	14,451,572	Nevada	11	0.10	302,674
Indiana	94	0.90	2,578,832	Arizona	5	0.05	140,265
New York	1,483	13.53	40,553,715	Alabama	1	0.01	26,570
Pennsylvania	738	6.73	19,884,510	New Mexico	3	0.03	75,948
New Jersey	460	4.20	12,861,865	No. Carolina	4	0.01	115,091
Massachusetts	171	1.56	4,818,144				
Connecticut	439	4.00	12,136,841	Total	10,962	100.07	298,418,870

2588 SHEVELIN-HIXON COMPANY
Jan. 1, 1927–Sept. 23, 1927

	Cars to date
Minnesota	511
Iowa	509
New York	372
Pennsylvania	357
Illinois	264
Wisconsin	230
Ohio	217
Utah	190
Michigan	122
New Jersey	121
Colorado	78
Kansas	72
Connecticut	71
Missouri	70
Massachusetts	64
South Dakota	62
Wyoming	60
Nebraska	51
Oregon	44
Idaho	34
Washington	34
Indiana	31
Oklahoma	21
West Virginia	12
Dist. Columbia	12
North Dakota	11
California	10
Canada	10
New Hampshire	8
Maine	8
Rhode Island	7
Maryland	7
Virginia	6
Texas	5
Vermont	5
Nevada	3
Montana	1
New Mexico	1
Delaware	1
Total	3, 692

BROOKS-SCANLON COMPANY
Jan. 1, 1927–Sept. 1, 1927

	Cars to date
California	85
Colorado	101
Delaware	1
Washington, D. C	11
Connecticut	92
Illinois	203
Indiana	34
Iowa	158
Kansas	50
Massachusetts	97
Maine	28
Maryland	16
Michigan	406
Minnesota	178
Missouri	20
Montana	1
Nebraska	87
North Dakota	1
New Hampshire	15
New Jersey	160
New Mexico	2
New York	444
Ohio	40
Oregon	54
Oklahoma	9
Pennsylvania	159
Rhode Island	29
South Dakota	10
Tennesee	4
Texas	54
Utah	12
Vermont	3
Virginia	2
Washington	12
Wisconsin	107
West Virginia	2
Wyoming	7
Export	1
Canada	4
Total	2, 699

2589 *Oregon-Washington Railroad and Navigation Co.—Carloads, commercial freight, received from connections by junctions, calendar years 1923 to 1927, inc.*

Junction	System lines					Foreign roads				
	1927	1926	1925	1924	1923	1927	1926	1925	1924	1923
Seattle						1,190	948	978	919	901
Tacoma						357	385	531	471	622
Portland						1,013	967	758	613	1,054
East Portland						10,202	9,494	8,659	12,136	14,247
Others						7,916	8,287	5,976	6,096	5,547
Huntington	42,276	40,615	39,675	39,879	38,575					
Others								3	16	20
Wallula						1,607	1,614	1,970	1,959	1,922
Yakima						1,235	1,014	1,105	981	912
Riparia						628	779	740	829	699
Others						1,679	1,721	1,560	1,014	705
Spokane						4,467	4,717	4,444	3,864	6,004
Plummer						224	349	312	1,190	1,744
Marengo						2,805	2,879	3,290	2,377	2,469
Others										540
Total	42,276	40,615	39,675	39,879	38,575	33,323	33,154	30,326	32,465	37,386

SUMMARY—COMMERCIAL FREIGHT

	1927	1926	1925	1924	1923
Division (1)	151,158	157,196	134,850	136,204	139,115
" (2)	73,993	81,114	75,272	70,058	65,456
" (3)	79,585	81,149	71,570	66,923	56,999
" (4)					13,546
Grand total	304,736	319,459	281,692	273,185	275,116

Oregon Short Line Railroad Co.—Carloads, commercial freight, received from connections by junctions, calendar years 1923 to 1927, inc.

Junction	System lines					Foreign roads				
	1927	1926	1925	1924	1923 [1]	1927	1926	1925	1924	1923 [1]
Huntington	61,623	68,580	60,768	57,453						
Weiser						1,109	1,202	1,136	127	
Boise						427	350	407	388	
Butte						683	801	1,030	868	
Silver Bow						3,358	3,680	4,204	4,637	
Armstead						913	937	846	763	
Granger	37,676	38,225	36,206	33,404						
Ogden	50,435	49,822	48,169	47,430		5,174	4,950	6,158	5,470	
U. I. C.						312	515	906	776	
Salt Lake	36,754	32,191	31,307	27,805		34,086	30,348	30,715	28,182	
Wells						470	316			
Total	186,488	188,718	176,450	165,892		46,532	43,099	45,402	41,211	

SUMMARY—COMMERCIAL FREIGHT

	1927	1926	1925	1924	1923 [1]
Utah division	239,062	229,090	226,834	205,367	
Ida. "	142,287	146,981	136,136	123,706	
Mont. "	43,792	45,424	43,447	41,109	
Grand total	425,141	422,398	406,417	370,182	

[1] Figures not available.

Reference: Daily report of carload freight (R. R. Form 1308).

2590 *Statement of cars loaded at stations on Oregon-Washington Railroad and Navigation Company (all) divisions during the years ending December 31, 1926, and December 31, 1925*

Commodity	Cars loaded		Capacity of cars (tons)				Weight of contents (tons)				Percentage of contents to capacity	
			Total		Average per car		Total		Average per car			
	1926 (1)	1925 (2)	1926 (3)	1925 (4)	1926 (5)	1925 (6)	1926 (7)	1925 (8)	1926 (9)	1925 (10)	1926 (11)	1925 (12)
COMMERCIAL												
GRAIN AND GRAIN PRODUCTS												
Barley	378	494	17,670	23,305	47	47	12,160	17,436	32	35	68.8	74.8
Corn	17	14	835	610	49	44	512	345	30	25	61.3	56.6
Grain, other	55	38	2,550	1,810	46	48	1,523	1,311	28	35	59.7	72.4
Oats	248	239	11,545	11,230	47	47	7,214	6,602	29	28	62.5	58.8
Wheat	20,457	12,439	961,788	590,140	47	47	855,102	514,011	42	41	88.9	87.1
Flour	3,938	3,125	186,235	146,362	47	47	123,396	100,458	31	32	66.2	68.6
Mill products	2,224	2,147	106,275	101,540	48	47	55,606	55,856	25	26	52.3	55.0
BOX-CAR LOADING												
Cement	1,772	(1)	85,600	(1)	48	(1)	69,404	(1)	39	(1)	81.1	(1)
Brick, concrete prod., & lime	669	2,708	30,730	120,645	46	45	19,799	94,070	30	35	64.4	78.0
Fruit, dried & evaporated	60	49	2,670	2,245	45	46	1,883	1,504	31	31	70.5	67.0
Fruit & vegetables, canned	783	779	32,965	31,902	42	41	25,462	24,534	33	31	77.2	76.9
Hay & straw	2,622	4,076	124,770	193,725	48	48	39,942	62,292	15	15	32.0	32.2
Merchandise (l. c. l.)	44,748	44,490	2,061,181	1,992,862	46	45	197,290	207,043	4	5	9.6	10.4
Ore & bullion	14,712	12,029	711,923	582,053	48	48	756,698	616,929	52	51	106.6	105.9
Salt	127	158	6,240	7,650	49	48	3,001	3,770	24	24	48.1	49.3
Sugar	674	670	33,120	32,550	49	49	16,434	15,746	24	24	49.6	48.4
Wool	348	329	16,535	15,600	48	47	5,468	5,040	16	15	33.1	32.3
REFRIGERATOR TRAFFIC												
Apples	9,800	7,738	309,067	249,703	32	32	184,869	148,381	19	19	59.8	59.4
Fruit, citrus		4		180		45		58		15		32.3
Fruit, deciduous, California												
Fruit, other green	4,150	2,763	125,865	83,575	30	30	58,635	38,891	14	14	46.6	46.4
Packing-house products	1,404	1,594	51,219	57,580	36	36	31,435	35,711	22	22	61.4	62.0
Potatoes	1,564	1,040	47,665	33,347	30	32	28,639	19,103	18	18	60.1	57.3
Poultry & eggs	255	167	7,800	5,065	1	30	3,496	2,302	14	14	44.8	45.4
Vegetables, other	2,589	1,803	81,940	57,330	32	32	38,943	26,667	15	15	47.5	46.5
LIVESTOCK												
Cattle	2,441	2,683	93,458	103,400	35	39	29,321	32,183	12	12	31.4	31.1
Hogs	439	453	16,776	17,350	38	38	3,991	4,090	9	9	23.8	23.6
Horses	433	231	17,112	9,300	40	40	4,298	2,282	10	10	25.1	24.6
Lv. stk., other, inc. mixed c. l.	343	284	13,258	11,120	39	39	3,609	2,991	11	11	27.2	26.9
Sheep	2,560	3,407	99,170	134,410	39	39	22,505	29,703	9	9	22.7	22.1
COAL-CAR LOADING												
Coal & coke	294	364	14,440	17,900	49	49	14,697	17,484	50	48	101.8	97.7
Gravel, sand, stone, etc	3,882	5,579	192,550	277,975	50	50	206,829	300,775	53	54	107.4	108.2
Sugar beets		1		50		50		45		45		90.0
MISCELLANEOUS												
Ice	476	225	18,220	8,320	38	37	15,182	7,241	32	32	83.3	87.0
Lumber	43,953	42,192	1,957,689	1,884,722	45	45	1,304,341	1,257,221	30	30	66.6	66.7
Logs	25,666	(1)	1,158,720	(1)	45	(1)	962,160	(1)	37	(1)	83.0	(1)
Products of forests, other	37,208	42,868	1,781,900	2,076,148	48	48	1,462,037	1,621,625	39	38	82.0	78.1
Miscellaneous commodities	9,280	10,172	431,185	459,143	46	45	222,008	241,944	24	24	51.5	52.7
Oil	5,073	4,334	163,236	136,440	32	31	158,022	135,282	31	31	96.8	90.2
Total commercial	245,642	211,686	10,973,902	9,477,587	45	45	6,947,911	5,650,926	28	27	63.3	59.6

See footnotes at end of table.

Statement of cars loaded at stations on Oregon-Washington Railroad and Navigation Company (all) divisions during the years ending December 31, 1926, and December 31, 1925—Continued

Commodity	Cars loaded		Capacity of cars (tons)				Weight of contents (tons)				Percentage of contents to capacity	
			Total		Average per car		Total		Average per car			
	1926 (1)	1925 (2)	1926 (3)	1925 (4)	1926 (5)	1925 (6)	1926 (7)	1925 (8)	1926 (9)	1925 (10)	1926 (11)	1925 (12)
COMPANY MATERIALS												
Coal	4,738	4,436	234,720	220,170	50	50	258,317	244,587	55	55	110.1	111.1
Fuel oil	3,303	3,265	165,120	156,129	50	50	159,369	156,164	48	48	96.5	95.8
Lumber	857	736	41,670	41,670	49	49	31,421	25,993	37	35	75.4	72.7
Ties	2,983	2,753	134,475	134,475	45	45	135,319	125,949	45	46	100.6	100.8
Other material	7,182	7,273	353,885	353,885	49	49	333,114	333,061	46	46	94.1	93.3
Total company	19,063	18,463	929,870	929,870	49	49	917,540	885,754	48	48	98.7	98.3
Grand total	264,705	230,149	11,903,772	11,903,772	45	45	7,865,451	6,536,680	30	28	66.1	63.0

Note: [1] Cement for 1925 included in "Cement, brick, and lime."
[2] Load for year 1925 included on this statement as "Products of forests, other."

Statement of cars loaded (selected commodities) at stations on 1st, 2nd, and 3rd divisions of O. W. R. & N. Company during the calendar years 1925 and 1926

Division	Commodity—Commercial—Grain and grain products	Cars loaded			
		1926	% total	1925	% total
1st	Barley	24		49	
	Corn	8		4	
	Grain, other	23		23	
	Oats			40	
	Wheat	4,309		2,874	
	Flour	803		1,037	
	Mill products	1,073		1,185	
	Total	6,258	2.55	5,212	2.46
2nd	Barley	76		92	
	Corn				
	Grain, other	14		9	
	Oats	57		69	
	Wheat	2,611		1,821	
	Flour	1,132		507	
	Mill products	400		158	
	Total	4,290	1.75	2,656	1.25
3rd	Barley	278		353	
	Corn	9		10	
	Grain, other	18		6	
	Oats	173		130	
	Wheat	13,537		7,744	
	Flour	2,003		1,581	
	Mill products	751		804	
	Total	16,769	6.83	10,628	5.02
1st	Cement	49			
2nd	"	1,719			
3rd	"	4			
	Total	1,772	0.72		0.00
1st	Hay & straw	1,022		1,882	
2nd	"	1,073		1,531	
3rd	"	527		663	
	Total	2,622	1.07	4,076	1.93

Statement of cars loaded (selected commodities) at stations on 1st, 2nd, and 3rd divisions of O. W. R. & N. Company during the calendar years 1925 and 1926—Continued

Division	Commodity—Commercial—Grain and grain products	Cars loaded			
		1926	% total	1925	% total
1st	Merchandise (l. c. l.)	29,586		28,850	
2nd	" "	5,615		5,981	
3rd	" "	9,547		9,650	
	Total	44,748	18.22	44,490	21.02
1st	Apples	2,365		1,459	
2nd	"	284		396	
3rd	"	7,151		5,883	
	Total	9,800	3.99	7,738	3.66
1st	Potatoes	326		257	
2nd	"	106		68	
3rd	"	1,132		715	
	Total	1,564	0.64	1,040	0.49
1st	Cattle	1,010		997	
2nd	"	1,123		1,382	
3rd	"	308		304	
	Total	2,441	0.99	2,683	1.27
1st	Gravel, sand, stone, etc	2,238		3,593	
2nd	" " " "	805		1,014	
3rd	" " " "	839		972	
	Total	3,882	1.58	5,579	2.64
1st	Lumber	29,652		28,134	
2nd	"	10,075		8,838	
3rd	"	4,226		5,220	
	Total	43,953	17.89	42,192	19.93
1st	Logs	19,732			
2nd	"	4,140			
3rd	"	1,794			
	Total	25,666	10.45		0.00
1st	Total, commodities named	92,238		70,393	
2nd	" " "	29,230		21,866	
3rd	" " "	42,297		34,035	
	Total	163,765	66.67	[1] 126,294	59.66
1st	Total, all other commodities	44,951		[2] 47,612	
2nd	" " " "	11,338		13,679	
3rd	" " " "	25,588		24,101	
	Total	81,877	33.33	[2] 85,392	40.34
1st	Grand total, all comml. trf	137,189		118,005	
2nd	" " " " "	40,568		35,545	
3rd	" " " " "	67,885		58,136	
	Grand total, all comml. trf	245,642	100.00	211,686	100.00

Notes: Divisions 1, 2, and 3.

[1] Cement and logs not included.
[2] Includes logs and cement.

Auditor's office, January 25, 1927.

Calendar year	Average mileage of road operated (miles)	Train-miles, freight (ordinary)	Car-miles, freight train loaded	Tons, revenue freight	Ton-miles, revenue freight	Freight revenue	Operating revenues	Operating expenses	Net operating revenues	Average freight-train miles, per mile of road	Average freight service, car-miles, per mile of road	Average freight revenue, per mile of road	Average operating revenues, per mile of road
1926	922.57	1,269,638	49,713,021	5,367,786	1,163,380,388	$16,438,412.86	[illegible]0,290,132.57	[1]**14,003,091.41	[1]#$6,287,041.16	1,380	76,203	$17,818.07	$21,993.05
1925	922.48	1,189,859	45,777,395	4,733,954	1,033,049,320	14,297,981.14	[illegible]6,277,363.65	[2] 13,756,282.61	4,521,081.04	1,292	70,671	15,499.50	19,813.29
1924	919.62	1,286,197	46,036,594	4,686,234	1,072,792,044	14,851,108.68	[3] 19,155,678.15	[3] 14,089,963.08	5,065,715.07	1,402	70,456	16,149.18	20,829.99
1923	918.42	1,473,522	46,059,630	4,930,609	1,075,569,942	14,819,634.34	[4] 19,931,956.62	[4] 16,007,905.27	3,524,051.35	1,614	75,127	16,136.01	21,266.91
1922	918.42	1,382,153	42,016,760	4,535,757	1,019,619,204	13,536,518.67	[5] 18,300,150.93	[5] 16,753,842.73	1,546,308.20	1,516	64,211	14,738.92	19,925.69

Calendar Year	Average operating expenses, per mile of road	Average net operating revenues, per mile of road	Average ton-miles (revenue freight), per mile of road	Average loaded freight-car miles (freight trains), per train-mi.	Average empty freight-car miles (freight trains), per tr.-mi.	Average ton-miles (revenue freight), per train-mile	Average freight revenue, per train-mile	Average operating revenues, per train-mile	Average operating expenses, per train-mile	Average net operating revenues, per train-mile	Average ton-mi. (revenue freight) per loaded freight-car mile	Average ton-mi. (all freight) per loaded freight-car mile	Average freight revenue, per loaded freight-car mile	Average miles hauled (revenue freight)	Average revenue, per ton of freight	Average revenue, per ton-mile of freight	Average operating ratio
																	Per cent
1926	$15,178.35	$6,814.70	1,261,021	39.05	14.54	849.89	$12.01	$6.59	$4.55	$2.04	----------	25.75	$.32798	216.73	$3.06242	$.01413	69.01
1925	14,912.28	4,901.01	1,119,861	38.40	14.55	794.52	11.00	6.05	4.55	1.50	22.34	25.02	.30922	218.22	3.02030	.01384	75.26
1924	15,321.50	5,508.49	1,166,560	35.70	12.86	760.82	10.53	6.08	4.47	1.61	23.08	26.16	.31944	228.92	3.16909	.01384	73.56
1923	17,429.83	3,837.08	1,171,109	31.07	14.01	684.83	9.44	5.86	4.80	1.06	23.20	26.33	.31961	218.14	3.00564	.01378	81.96
1922	18,242.03	1,683.66	1,110,188	30.19	10.70	695.60	9.23	5.63	5.16	.48	24.13	27.37	.32029	224.80	2.98440	.01328	91.55

[1] The following revenues and expenses account of water-line operations and motor-coach operations are excluded from the following items:

Water line	*$7,944.08	**$22,473.86	(#$14,529.78)
Motor coach	*14,943.62	9,070.75	#5,872.87

[2] The following revenues and expenses account water-line operations and motor coach operations excluded from the following items:

Water line	*$8,181.89	**$108,117.80
Motor coach	*6,044.53	**3,400.34

[3] $8,325.10 water-line revenue and $87,011.35 water-line expenses which are included in schedules 710 and 720 are not included in items * and **.
[4] Does not include $12,660.10 water-line revenues nor $32,274.73 water-line expenses.
[5] Does not include $10,604.94 water-line revenues nor $4,813.87 water-line expenses.
#Indicates red figures.

Reference: Annual reports to P. S. C. Or.

2592 *Oregon-Washington Railroad and Navigation Co.—Statistics of rail-line operations, passenger, State of Oregon, calendar years, 1922 to 1926, inc.*

Calendar year	Average mileage of road operated (miles)	Passenger train (miles)	Passenger locomotive-miles (principal)	Passenger locomotive-miles (total)	Passenger train, car-miles (passenger)	Passenger train, car-miles (total)	Revenue passengers carried	Revenue passenger-miles	Passenger revenue [1]	Passenger service train revenue [1]	Passenger train-miles, per mile of road
1926	922.57	1,678,634	1,678,634	1,714,486	2,805,535	12,453,352	499,431	69,797,089	$2,340,063.73	$3,102,579.29	1,820
1925	922.48	1,683,502	1,683,502	1,717,608	[2] 2,828,889	[2] 12,415,580	579,632	75,535,184	2,549,648.00	3,257,739.26	1,825
1924	919.62	1,670,670	1,670,670	1,713,474	2,870,894	12,314,599	640,688	79,769,542	2,756,348.07	3,564,709.33	1,817
1923	918.42	1,711,420	1,711,420	1,799,327	3,056,694	12,684,307	827,335	92,258,748	3,218,450.61	4,017,064.11	1,864
1922	918.42	1,731,653	1,731,674	1,908,556	3,205,415	12,958,358	908,548	94,363,844	3,318,835.70	4,133,668.76	1,885

Calendar year	Passenger service, car-miles, per mile of road	Passenger service, train-revenue, per mile of road	Revenue passenger-miles, per mile of road	Passenger train, car-miles, per train-mile (passenger trains)	Revenue passenger-miles, per train mile	Passenger service, train revenue, per train mile	Passenger train-miles, per locomotive-mile (passenger train)	Passenger car miles, per locomotive-mile (passenger train)	Revenue passenger-miles, per passenger car-mile	Passenger revenue, per passenger car-mile	Average miles carried, revenue passengers	Average revenue, per passenger	Average revenue, per passenger-mile	Average operating ratio
														Per cent
1926	13,680	$3,362.97	75,555	7.42	40.89	$1.82	.98	7.26	9.00	$.30169	139.75	$4.08546	$.03353	69.01
1925	13,699	3,531.50	81,883	7.37	43.93	1.89	.98	7.23	9.08	.32960	130.32	4.39874	.03375	75.26
1924	13,774	3,876.29	86,742	7.37	45.87	2.05	.98	7.19	10.40	.35943	124.51	4.30217	.03455	73.56
1923	14,097	4,373.89	100,454	7.41	52.26	2.28	.95	7.05	11.91	.41547	111.51	3.89014	.03489	81.99
1922	14,381	4,500.85	102,746	7.48	52.96	2.32	.91	6.79	11.97	.42107	103.86	3.65290	.03517	91.55

Notes: (1) Revenues and expenses account operations of motor coach and water lines are not included.
(2) Includes 418 motor-car miles.

Reference: Annual reports to P. S. C. Or.

Calendar year	Average mileage of road operated (miles)	Train-miles, freight (ordinary)	Car-miles, freight train loaded	Tons, revenue freight	Ton-miles, revenue freight	Freight revenue	Operating revenues	Operating expenses	Net operating revenues	Average freight-train miles per mile of road	Average freight service, car-mile, per mile of road	Average freight revenue, per mile of road	Average operating revenues, per mile of road
1926	2,237.23	2,181,887	70,263,219	8,440,223	1,649,734,378	$23,865,989.17	[1] $30,435,322.09	[1] $22,248,096.43	[1] $8,187,225.66	980	45,494	$10,667.65	$13,604.02
1925	2,237.27	2,034,887	64,037,704	7,269,262	1,461,668,222	20,886,849.06	[1] 27,826,572.64	[1] 22,292,034.35	[1] 5,534,538.29	915	42,830	9,335.86	12,437.74
1924	2,232.89	2,144,485	63,481,641	6,925,462	1,489,427,529	21,212,233.18	[1] 28,700,488.71	[1] 22,491,964.21	[1] 6,208,524.50	966	41,396	9,499.90	12,853.52
1923	2,236.51	2,438,994	65,367,193	7,364,791	1,535,704,784	21,912,407.44	[1] 30,175,275.93	[1] 25,760,802.82	[1] 4,414,473.11	1,101	44,905	9,797.59	13,492.12
1922	2,231.30	2,295,323	59,298,888	6,530,396	1,429,103,853	19,751,520.77	[1] 28,077,202.55	[1] 26,330,334.33	[1] 1,746,868.22	1,040	38,461	8,852.02	12,583.34

Calendar year	Average operating expenses, per mile of road	Average net operating revenues, per mile of road	Average ton-miles (revenue freight), per mile of road	Average loaded freight-car miles (freight trains), per train-mile	Average empty freight-car miles (freight trains), per train-mile	Average ton-miles (revenue freight), per train-mile	Average freight revenue, per train-mile	Average operating revenues, per train-mile	Average operating expenses, per train-mile	Average net operating revenues, per train-mile	Average ton-mi. (revenue freight), per loaded freight-car mile	Average ton-mile (all freight), per loaded freight-car mile	Average freight revenue, per loaded freight-car mile	Average miles hauled (revenue freight)	Average revenue, per ton of freight	Average revenue per ton-mile of freight	Average operating ratio
																	Per cent
1926	$9,944.48	$3,659.54	737,400	32.03	12.61	694.24	$10.04	$5.65	$4.13	$1.52	----------	25.85	$0.33553	195.46	$2.82765	$0.01447	73.10
1925	9,963.95	2,473.79	653,327	31.28	12.32	637.42	9.11	5.21	4.17	1.04	22.39	25.28	.31995	201.08	2.87331	.01429	80.11
1924	10,073.03	2,780.49	667,040	29.44	11.30	611.69	8.71	5.21	4.08	1.13	22.95	26.20	.32686	215.07	3.06293	.01424	78.37
1923	11,518.30	1,973.82	686,652	26.54	12.30	565.58	8.07	5.17	4.42	.75	23.05	26.39	.32893	209.32	2.97529	.01427	85.37
1922	11,800.45	782.79	640,480	25.56	9.60	563.47	7.79	4.95	4.64	.31	23.70	27.43	.32761	218.84	3.02455	.01382	93.78

Notes: [1] Revenues and expenses account operations of motor coaches and water lines are not included.

Reference: Annual reports to P. S. C. Or.

2594 *Oregon-Washington Railroad and Navigation Co.—Statistics of rail-line operations, passenger-system, calendar years, 1922 to 1926, inc.*

Calendar year	Average mileage of road operated (miles)	Passenger train (miles)	Passenger locomotive-miles (principal)	Passenger locomotive-miles (total)	Passenger train, car-miles (passenger)	Passenger train, car-miles (total)	Revenue passengers carried	Revenue passenger-miles	Passenger revenue	Passenger service, train revenue	Passenger-train miles, per mile of road	Passenger service, car-miles, per mile of road	Passenger service, train revenue, per mile of road
1926	2,237.23	[1] 2,941,181	2,734,214	2,792,039	[2] 49,984.60	[3] 18,449,169	781,925	119,559,209	$3,902,395.56	$5,383,395.35	1,315	8,423	$2,406.23
1925	2,237.27	[3] 2,979,042	2,768,453	2,824,783	[4] 50,523.32	[5] 18,577,570	949,866	133,490,563	4,495,802.68	5,760,900.48	1,331	3,527	2,575.00
1924	2,232.89	[5] 2,976,510	2,768,225	2,838,525	[6] 52,201.51	[6] 18,868,944	1,093,130	141,322,592	4,858,995.28	6,376,471.97	1,333	8,759	2,855.70
1923	2,236.51	[7] 3,027,449	2,907,532	3,028,587	[7] 56,382.30	[7] 19,685,553	1,398,678	163,388,504	5,681,507.19	7,157,275.93	1,353	9,005	2,200.11
1922	2,231.30	[8] 3,036,902	2,943,472	3,158,260	[8] 57,870.16	[8] 19,902,016	1,557,613	164,537,451	5,751,606.21	7,314,823.32	1,361	9,222	3,278.26

Calendar year	Revenue, passenger-miles, per mile of road	Passenger train car-miles, per train-mile (passenger trains)	Revenue passenger-miles, per train-mile	Passenger service, train revenue, per train-mile	Passenger-train-mi., per locomotive-mile, (passenger train)	Passenger-car miles, per locomotive-mile (passenger train)	Revenue, passenger-miles, per passenger-car-mile	Passenger revenue, per passenger-car mile	Average miles carried, revenue passengers	Average revenue, per passenger	Average revenue, per passenger-mile	Average operating ratio
												Per cent
1926	53,441	6.27	90.88	$1.80	.98	6.53	9.93	$.33078	152.90	$5.09307	$.03331	73.10
1925	59,667	6.24	43.87	1.89	.98	6.50	10.83	.36465	140.54	4.73309	.03368	80.11
1924	63,291	6.34	46.07	2.08	.98	6.57	11.33	.38952	129.28	4.44503	.03438	78.37
1923	73,055	6.50	52.43	2.30	1.00	6.50	12.77	.44417	116.82	4.06206	.03477	85.37
1922	73,741	6.55	52.47	2.33	.93	6.27	12.76	.44598	105.63	3.69263	.03496	93.78

Notes: [1] Includes 206,967 motor-car miles.
[2] " 209,043 " " "
[3] " 210,589 " " "
[4] " 212,376 " " "
[5] " 208,285 " " "
[6] " 211,104 " " "
[7] " 119,923 " " "
[8] " 93,510 " " "
[9] Revenues and expenses account operations of motor coach and water lines are not included.

Reference: Annual reports to P. S. C. Or.

	Year ended Dec. 31, 1926	Year ended Dec. 31, 1925	Year ended Dec. 31, 1924	Year ended Dec. 31, 1923	Year ended Dec. 31, 1922
Average miles operated	9,647.04	9,547.76	9,510.23	9,482.56	9,405.67
Operating revenues:					
1. Freight revenue	$157,841,014.51	$150,005,741.79	$148,233,006.01	$157,136,803.62	$141,987,481.28
2. Passenger revenue	29,674,038.54	31,092,455.40	32,635,301.50	36,076,470.20	33,972,832.74
3. Mail revenue	4,431,818.86	4,411,819.27	4,613,520.33	4,556,941.57	4,482,520.55
5. Express revenue	4,128,205.42	3,504,867.27	4,689,567.86	4,748,252.97	4,819,475.67
5. Other passenger-train revenue	4,068,970.19	3,945,347.70	3,758,318.22	3,620,585.62	3,139,909.39
6. Other train revenue	67,912.24	56,104.99	58,732.25	59,819.91	75,367.73
7. Switching revenue	1,261,886.37	1,173,187.41	1,175,903.19	1,183,400.96	976,853.71
8. Water line revenue	55,371.64	36,971.05	73,800.62	50,407.39	61,371.21
9. Other revenue	3,867,045.75	3,813,405.99	3,796,967.78	3,885,783.07	3,361,309.38
10. Total operating revenues	205,416,263.52	196,039,900.87	199,035,117.76	211,318,465.31	192,877,121.06
Operating expenses:					
11. Maintenance of way and structures	28,160,940.03	27,945,376.16	29,585,968.29	30,801,361.58	27,290,092.25
12. Maintenance of equipment	38,010,184.42	36,691,869.40	37,153,620.04	41,706,436.63	38,847,741.48
13. Total	66,171,124.45	64,637,245.56	66,739,588.33	72,507,798.21	66,137,833.73
14. Traffic expenses	4,529,212.43	4,101,242.59	3,884,546.85	3,644,869.01	3,446,424.29
15. Transportation expenses, rail line	58,567,843.01	59,038,783.25	60,059,007.27	65,351,979.79	63,472,796.88
16. Transportation expenses, water line	50,349.38	51,587.04	63,968.99	61,389.50	60,586.26
17. Miscellaneous operating expenses	4,247,562.12	4,197,810.06	4,097,129.83	4,105,898.72	3,815,939.57
18. General expenses	7,233,491.01	6,853,059.33	6,835,214.33	6,737,959.08	6,994,435.34
19. Transportation for investment (credit)	50,042.09	37,248.04	68,357.51	160,784.04	81,790.73
20. Total operating expenses	140,769,540.31	138,842,470.79	141,611,098.09	152,249,060.27	143,846,229.34
21. Revenues over expenses	64,646,723.21	59,197,421.08	57,424,019.67	59,069,385.04	49,030,892.32
Taxes—					
22. State and county	10,903,677.65	10,186,120.95	10,387,024.49	9,990,486.77	9,831,820.86
23. Federal capital stock	303,566.50	593,817.66	592,126.02	589,607.98	555,006.10
24. Federal income	4,514,978.51	2,681,727.00	3,468,221.70	2,978,214.49	2,898,292.39
25. Federal war revenue	3,710.40	1,215.75	10,343.22	14,757.39	3,567.93
26. Total taxes	15,725,933.06	13,462,881.36	14,457,715.43	13,573,066.63	13,251,551.42
27. Uncollectible railway revenues	13,950.91	15,241.29	29,681.31	21,783.69	13,274.18
28. Railway operating income	48,906,839.24	45,719,298.43	42,936,622.93	45,474,534.72	35,766,066.72
29. Equipment rents (debit)	6,028,219.60	4,809,333.96	4,274,780.69	4,938,151.82	1,560,814.74
30. Joint facility rents (debit)	778,476.60	871,319.01	748,680.84	876,137.37	708,934.05
31. Net railway operating income	42,100,143.04	40,038,645.46	37,913,161.40	39,660,245.53	33,496,317.93
Per cent	68.53	70.11	71.15	72.05	74.56

Reference: Annual report to stockholders.

2596 *Southern Pacific Company—statistics of rail-line operations, freight, State of Oregon, calendar years, 1922 to 1926, inc.*

Calendar year	Average mileage of road operated (miles)	Train-miles, freight (ordinary)	Car-miles, freight train loaded	Tons, revenue freight	Ton-miles, revenue freight	Freight revenue	Operating revenues	Operating expenses	Net operating revenues	Average freight-train miles per mile of road	Average freight-service car-miles per mile of road	Average freight revenue per mile of road
1926	1,389.23	1,797,924	44,273,587	8,352,145	965,762,019	$12,435,687.38	$18,978,454.11	$17,203,753.28	$1,774,700.83	1,303	50,770	$8,951.50
1925	1,357.02	1,808,574	44,670,819	8,464,395	989,319,026	12,706,906.45	19,735,849.24	17,171,180.10	2,564,669.14	1,343	52,738	9,363.83
1924	1,329.90	1,760,092	41,396,177	7,144,700	932,032,504	12,152,165.28	19,579,471.80	17,117,874.59	2,461,597.21	1,334	49,677	9,137.65
1923	1,309.70	1,973,563	44,405,488	7,754,930	1,006,206,589	13,009,759.56	21,299,953.59	17,742,793.23	3,557,166.36	1,523	53,251	9,933.39
1922	1,310.14	1,626,842	34,821,695	5,909,166	789,715,382	11,310,858.39	19,408,727.40	16,428,871.37	2,979,856.03	1,245	40,882	8,633.09

Calendar year	Average operating revenues per mile of road	Average operating expenses per mile of road	Average net operating revenues per mile of road	Average ton-miles, (revenue freight) per mile of road	Average loaded-freight-car mi. (freight trains) per train-mile	Average empty-freight-car miles (freight trains) per train-mile	Average ton-mile (revenue freight) per train-mile	Average freight revenue per train-mile	Average operating revenues per train-mile	Average operating expense per train-mile	Average net operating revenues per train-mile	Average ton-mi. (revenue freight) per loaded-frt.-car-mile	Average ton-mi. (all freight) per loaded-frt.-car-mile	Average freight revenue per loaded-frt.-car-mile	Average miles hauled (revenue freight)	Average revenue per ton of frt.	Average revenue per ton-mile of freight	Average operating ratio
																		%
1926	$13,661.13	$12,383.66	$1,277.47	695,178	24.45	12.37	492.11	$6.34	$3.60	$3.26	$0.34	.....	25.10	$0.27539	115.63	$1.48892	$.01288	90.65
1925	14,543.52	12,653.59	1,889.93	729,038	24.52	4.71	505.48	6.49	3.52	3.06	.46	21.80	25.04	.28003	116.88	1.50122	.01284	87.01
1924	14,722.51	12,871.55	1,850.96	700,829	23.34	11.91	489.45	6.38	3.46	3.02	.44	22.14	25.19	.28870	130.45	1.70086	.01304	87.43
1923	16,263.23	13,547.22	2,716.01	768,273	22.26	11.04	482.67	6.24	3.53	2.94	.59	22.39	25.21	.28948	129.75	1.67761	.01293	83.30
1922	14,814.24	12,539.78	2,274.46	602,772	21.34	9.84	457.75	6.56	3.57	3.02	.55	22.41	25.47	.32094	133.64	1.91407	.01432	84.65

Reference: Annual reports to P. S. C. Or.

Calendar year	Average mileage of road operated (miles)	Passenger train-miles	Passenger locomotive-miles (principal)	Passenger locomotive-miles (total)	Passenger-train car-miles (passenger)	Passenger-train car-miles (total)	Revenue passengers carried	Revenue passenger-miles	Passenger revenue	Passenger-service train revenue	Passenger-train miles per mile of road	Passenger-service car-miles per mile of road	Passenger-service train-revenue per mile road
1926	1,389.23	3,286,946	1,922,680	2,141,985	5,798,811	18,265,980	3,442,063	135,930,337	$4,227,022.11	$5,716,704.99	2,366	13,295	$4,115.02
1925	1,357.02	3,633,926	2,013,065	2,417,355	6,126,228	18,882,003	4,228,463	151,803,742	4,782,928.02	6,230,652.48	2,621	13,996	4,591.42
1924	1,329.90	3,741,972	2,024,312	2,386,980	6,361,558	18,736,487	4,810,979	156,749,588	4,915,424.92	6,628,492.88	2,801	14,215	4,984.20
1923	1,309.70	3,928,238	2,108,510	2,490,446	7,196,639	19,659,874	5,535,472	176,497,347	5,661,664.35	7,472,103.31	2,999	15,141	5,705.20
1922	1,310.14	3,683,775	1,925,767	2,340,063	6,758,635	18,855,534	5,939,605	172,447,213	5,627,784.33	7,340,235.48	2,812	14,556	5,602.63

Calendar year	Revenue passenger-miles per mile of road	Passenger-train-car miles per train-mile (passenger trains)	Revenue passenger-miles per train-mile	Passenger service train revenue per train-mile	Passenger-train miles per locomotive-mile (passenger trains)	Passenger-car miles per locomotive mile (passenger trains)	Revenue passenger-miles per passenger-car-mile	Passenger revenue per passenger-car mile	Average miles carried revenue passengers	Average revenue per passenger	Average revenue per passenger-mile	Average operating ratio
												%
1926	97,846	5.56	41.15	$1.73	*0.90	**7.56	11.11	$0.34539	39.49	$1.22805	$0.03110	90.65
1925	111,866	5.20	41.60	1.71	.83	6.80	11.97	.37719	35.90	1.13112	.03151	87.01
1924	117,866	5.01	41.71	1.76	.85	6.72	12.51	.39221	32.58	1.02171	.03136	87.43
1923	134,762	5.00	44.64	1.89	.84	6.64	13.16	.42228	31.88	1.02280	.03208	83.30
1922	131,625	5.12	46.55	1.98	.82	6.77	13.44	.43852	29.03	.94750	.03263	84.65

In the compilation of * and ** the mileage of steam trains only were used.

Reference: Annual reports to P. S. C. Or.

Calendar year	Average mileage of road operated (miles)	Train-miles, freight (ordinary)	Car-miles, freight-train loaded	Tons, revenue freight	Ton-miles, revenue freight	Freight revenue	Operating revenues [1]	Operating expenses [1]	Net operating revenues [1]	Average freight-train miles per mile of road	Average freight service car-miles per mile of road
1926	8,799.85	17,173,697	553,020,570	43,659,032	10,971,917,871	$152,452,052.55	$213,731,314.02	$146,140,028.40	$67,591,285.62	1,958	101,510
1925	8,726.39	16,886,980	530,965,579	43,121,717	10,569,416,545	148,310,085.75	210,180,251.45	148,434,781.61	61,745,469.84	1,944	98,053
1924	7,425.54	14,499,249	454,035,253	35,034,224	9,156,815,341	130,253,033.69	192,223,853.05	135,054,122.57	57,169,730.48	1,959	95,846
1923	7,125.74	15,578,498	465,226,589	35,421,618	9,176,701,177	136,069,361.65	202,962,012.97	136,784,211.39	66,177,801.58	2,197	101,190
1922	7,118.01	12,507,828	375,815,313	28,681,967	7,513,884,076	120,839,278.16	183,409,473.53	127,492,889.39	55,916,584.14	1,764	79,929

Calendar year	Average freight revenue per mile of road	Average operating revenues per mile of road	Average operating expenses per mile of road	Average net operating revenues per mile of road	Average ton-miles (revenue freight) per mile of road	Average loaded freight car-mi. (freight trains) per train-mile	Average empty freight car-mi. (freight trains) per train-mile	Average ton-miles (revenue freight) per train-mile	Average freight revenue per train-mile	Average operating revenues per train-mile	Average operating expenses per train-mile	Average net operating revenues per train-mile	Average ton-mi. (revenue freight) per loaded frt. car-mile	Average ton-mi. (all freight) per loaded frt. car-mile	Average freight revenue per loaded frt. car-mile	Average miles hauled (revenue freight)	Average revenue per ton of freight	Average revenue per ton-mile of freight	Average operating ratio
																			Per ct.
1926	$17,273.31	$23,705.52	$16,163.96	$7,541.56	1,246,485	32.10	17.86	597.79	$8.28	$5.12	$3.49	$1.63	------	22.09	$0.27122	251.31	$3.49188	$0.01389	68.38
1925	16,939.78	23,569.34	16,621.20	6,948.14	1,210,799	31.30	17.23	584.65	8.18	5.01	3.54	1.47	19.64	22.68	.27477	245.11	3.43934	.01403	70.62
1924	17,479.27	25,293.73	17,769.49	7,524.24	1,232,673	31.21	16.10	600.06	8.51	5.14	3.61	1.53	19.99	22.73	.28346	251.37	3.71787	.01422	70.26
1923	19,049.86	27,899.87	18,806.13	9,093.74	1,287,454	29.72	14.96	566.89	8.39	5.21	3.52	1.70	19.62	22.47	.29036	239.07	3.84142	.01483	67.39
1922	16,942.13	25,258.45	17,553.40	7,705.05	1,055,356	29.92	13.91	573.68	9.21	5.30	3.68	1.62	19.87	22.46	.31896	261.97	4.21308	.01608	69.51

Notes: [1] Revenues and expenses of water lines are not included.

Reference: Annual reports to P. S. C. Or.

Calendar year	Average mileage of road operated (miles)	Passenger-train miles	Passenger-locomotive miles (principal)	Passenger-locomotive miles (total)	Passenger-train car-miles (passenger)	Passenger-train car-miles (total)	Revenue passengers carried	Revenue passenger-miles	Passenger revenue	Passenger-service train revenue	Passenger-train miles per mile of road	Passenger service-car-miles per mile of road
1926 [1]	8,799.85	22,127,362	18,038,886	19,197,443	43,414,991	162,696,982	38,307,435	1,547,042,580	$41,791,812.33	$52,528,070.27	2,514	18,795
1925 [1]	8,726.39	22,682,163	18,347,498	19,740,652	43,827,291	160,353,363	39,928,276	1,579,519,237	42,660,472.12	53,196,836.52	2,599	18,701
1924	7,425.54	21,099,354	16,639,477	17,945,232	40,387,096	144,545,990	40,208,180	1,551,117,256	42,379,904.20	53,513,035.17	[2] 2,840	[2] 19,694
1923	7,125.74	21,762,307	16,877,280	18,563,251	43,039,214	146,699,790	43,222,414	1,634,741,591	46,858,061.02	58,326,346.40	3,054	20,760
1922	7,118.01	20,661,834	15,872,719	17,470,077	39,844,668	137,376,984	42,381,960	1,530,199,907	44,546,214.57	55,156,759.89	2,903	19,490

Calendar year	Passenger-service train revenue per mile of road	Revenue passenger-miles per mile of road	Passenger-train car-miles per train mile (passenger trains)	Revenue passenger-miles per train mile	Passenger-service train revenue per train mile	*Passenger-train miles per locomotive-mile (passenger train)	**Passenger-car miles, per locomotive-mile (passenger train)	Revenue passenger-miles per passenger-car mi.	Passenger revenue per passenger-car mile	Average miles carried, revenue passengers	Average revenue per passenger	Average revenue per passenger-mile	Average operating ratio
													Per cent
1926 [1]	$5,800.26	166,998	7.35	65.75	$2.28	[2] 0.94	[2] 8.13	13.69	$0.37658	40.38	$01.09006	$.02701	68.38
1925 [1]	5,937.46	171,711	7.07	65.38	2.26	[2] .93	[2] 7.76	14.07	.38867	39.56	1.06843	.02701	70.62
1924	7,022.49	198,258	6.85	69.19	2.45	[2] .93	[2] 7.65	15.73	.43960	38.50	1.05401	.02732	70.26
1923	7,988.72	218,144	6.74	70.93	2.60	[2] .91	[2] 7.47	16.07	.47151	37.82	1.08411	.02866	67.39
1922	7,563.57	204,171	6.65	69.80	2.59	[2] .91	[2] 7.43	16.06	.47870	36.10	1.05107	.02911	69.51

Notes: [1] Auto bus operations are excluded.
[2] In the compilation of * and ** the train miles of steam trains only were used.

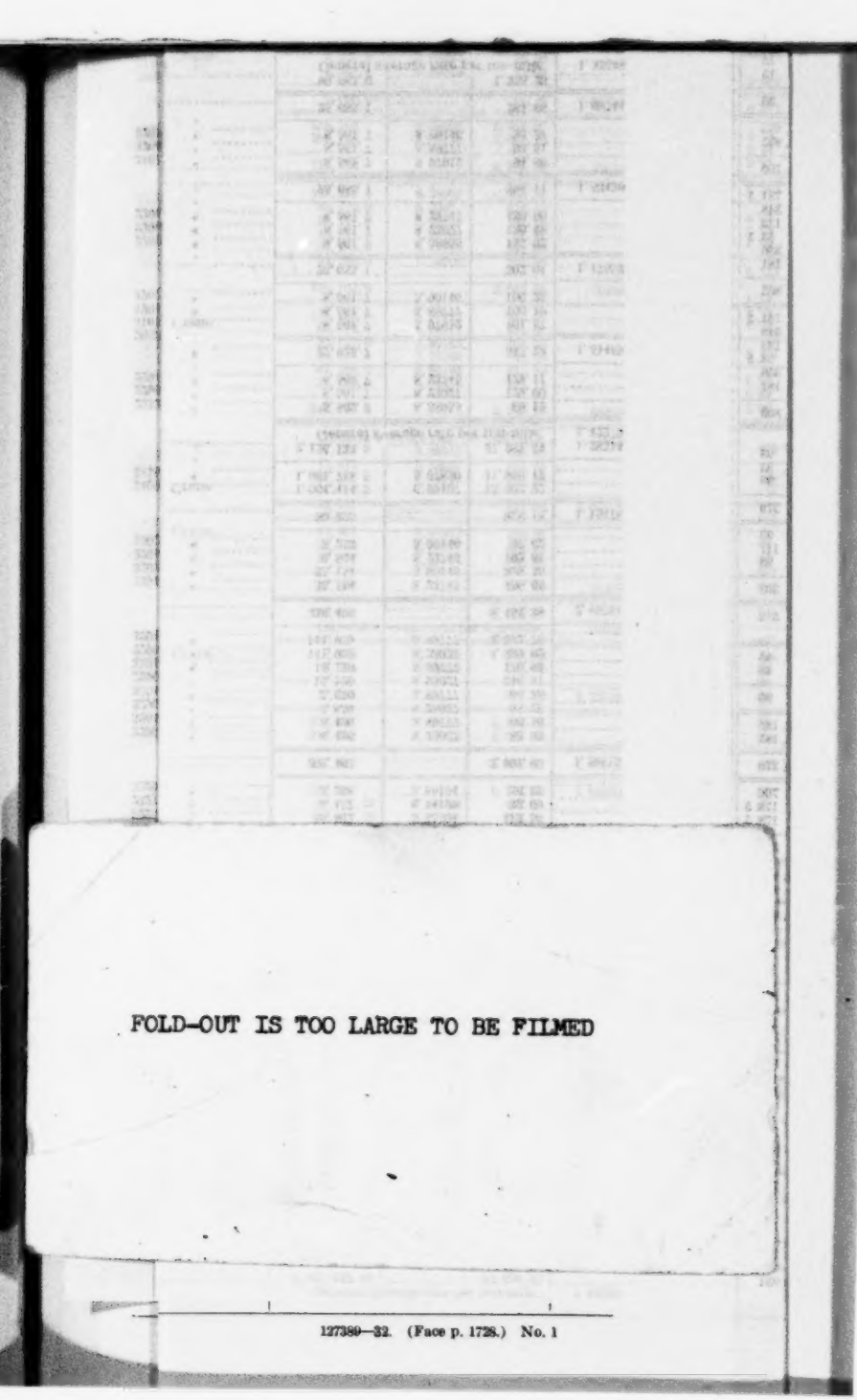
Reference: Annual report to P. S. C. Or.

	Year ended Dec. 31, 1926	Year ended Dec. 31, 1925 [1]	Year ended Dec. 31, 1925	Year ended Dec. 31, 1924	Year ended Dec. 31, 1923	Year ended Dec. 31, 1922
1. Average miles of road operated	13,279.69	13,178.69	12,950.25	11,476.41	11,231.61	11,223.88
Railway operating revenues:						
2. Freight	$216,625,764.45	$213,020,384.49	$211,314,581.67	$193,692,957.66	$199,591,192.30	$180,438,950.63
3. Passenger	55,262,330.25	56,292,246.57	56,101,352.70	56,566,134.41	62,158,875.82	59,003,549.86
4. Mail and express	11,434,005.02	11,146,987.57	11,054,123.49	11,649,054.20	11,613,318.09	11,235,227.76
5. All other transportation	9,055,584.55	8,075,420.83	8,052,860.91	7,430,606.91	6,802,868.68	5,797,644.88
6. Incidental	7,383,698.56	6,836,855.65	6,822,288.31	6,459,204.58	6,921,629.82	5,878,419.44
7. Joint facility (credit)	418,677.65	261,336.59	260,824.31	181,099.06	175,771.46	216,139.06
8. Joint facility (debit)	1,379,062.42	531,477.92	531,477.92	74,946.04	59,041.35	50,763.13
9. Total railway operating revenues	298,800,998.06	295,101,753.78	293,074,553.47	275,904,110.78	287,204,634.82	262,519,169.50
Railway operating expenses:						
10. Maintenance of way and structures	42,464,362.35	40,678,880.33	40,110,806.20	39,367,717.42	41,235,817.14	36,806,129.25
11. Maintenance of equipment	50,637,575.96	49,780,124.29	49,196,332.98	47,213,237.71	50,451,491.20	48,264,068.26
12. Total maintenance	93,101,938.31	90,459,004.62	89,307,139.18	86,580,955.13	91,687,308.34	85,070,197.51
13. Traffic	6,359,577.56	5,682,279.22	5,638,295.11	5,239,730.72	4,990,768.33	4,417,409.00
14. Transportation	102,132,949.91	107,847,718.86	106,977,410.53	99,119,567.71	98,559,831.08	92,454,184.73
15. Miscellaneous operations	4,997,186.30	4,706,362.26	4,706,362.26	4,105,406.25	4,347,543.44	3,928,318.82
16. General	10,788,766.74	10,606,797.46	10,513,785.75	9,399,613.62	8,590,864.92	8,323,358.92
17. Transportation for investment (credit)	1,784,938.55	1,540,592.84	1,533,674.64	1,393,944.79	1,009,728.03	529,012.60
18. Total railway operating expenses	215,595,480.27	217,761,569.58	215,609,318.19	203,051,328.64	207,166,588.08	193,664,456.38
19. Net revenue from railway operations	83,205,517.79	77,340,184.20	77,465,235.28	72,852,782.14	80,038,046.74	68,854,713.12
20. Railway tax accruals	21,476,810.65	21,340,397.79	21,275,282.02	19,867,104.43	20,365,327.70	18,859,356.11
21. Uncollectible railway revenues	80,823.05	96,333.01	95,349.48	144,538.87	87,738.38	127,593.25
22. Railway operating income	61,647,884.09	55,903,453.40	56,094,603.78	52,841,138.84	59,584,980.66	49,867,763.76
23. Equipment rents, net	5,636,727.42	5,847,252.33	5,764,352.06	4,802,215.18	[2] 62,492.06	3,815,727.68
24. Joint facility rents, net	214,438.90	12,825.99	16,492.50	[2] 62,492.06	[2] 198,416.89	[2] 170,810.11
25. Net railway operating income	55,796,717.77	50,043,375.08	50,313,759.22	48,101,415.72	54,228,023.48	46,222,846.19

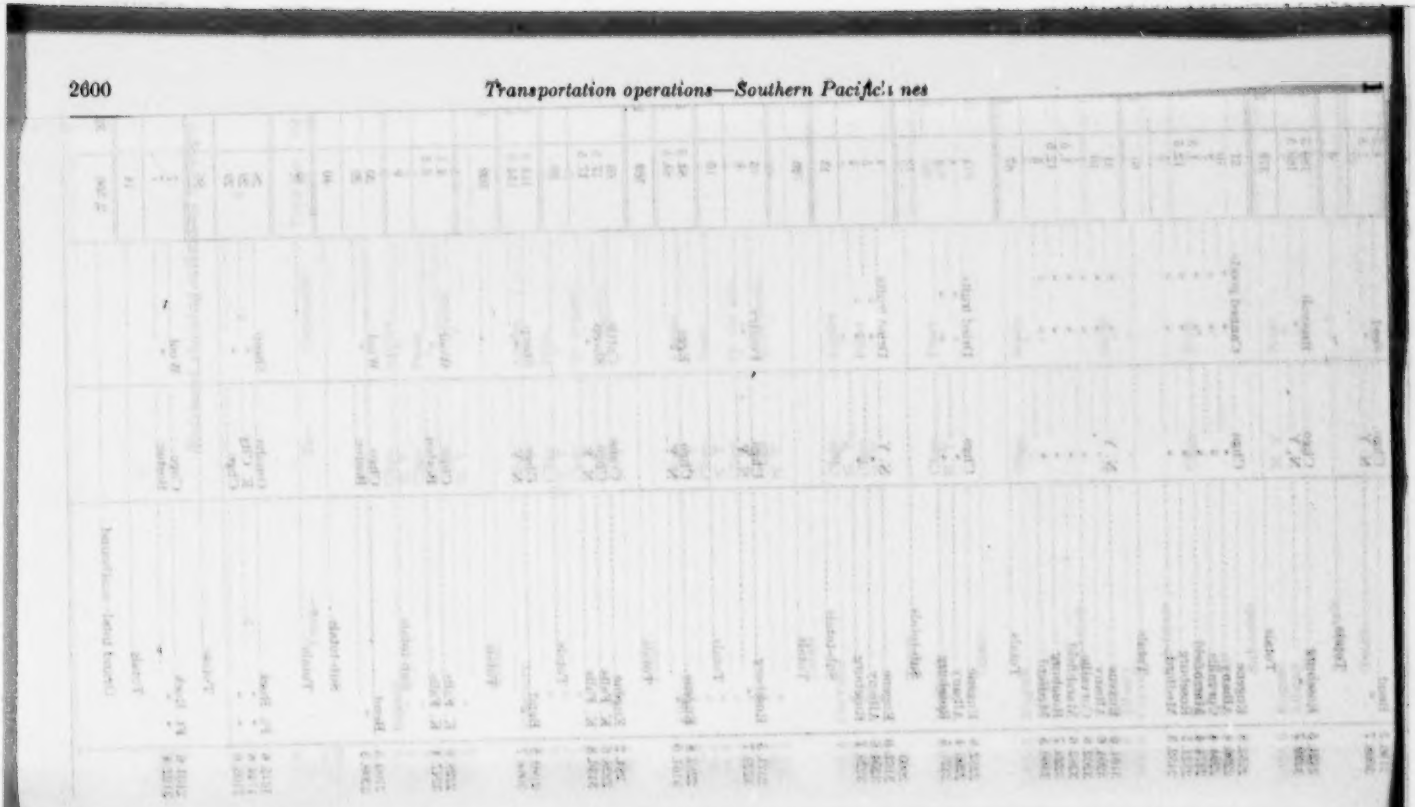
[1] For the purpose of comparison the 1925 figures with above statement include the operations, for the entire year 1925, of the San Antonio & Aransas Pass, taken into the system May 1, 1925.

[2] Credit.

Reference: Annual reports to stockholders.



FOLD-OUT IS TOO LARGE TO BE FILMED



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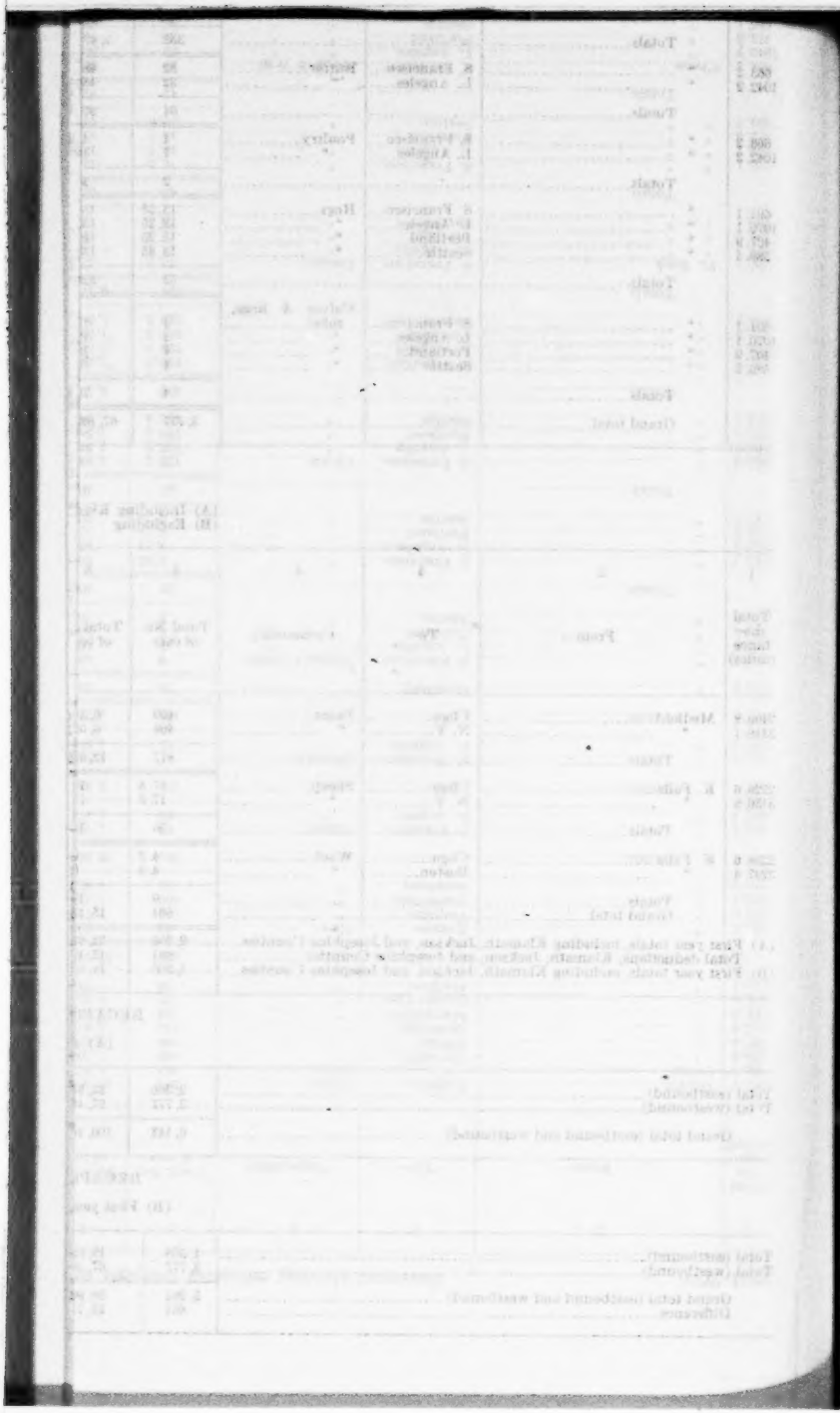


2607 *Statement showing estimated tonnages and revenues created by proposed cross-State line in Oregon*

EASTBOUND TRAFFIC, THIRD YEAR

1 Distance over cross-State line	2 From—	3 To—	4 Commodity	5 Cars	6 Tons	7 Rate, per ton-mile (cents)	8 Revenue to cross-State line
189	Crescent Lake	Crane	Fresh fruits	257	3,989	1.42279	$10,726.71
168.5	Cross trunk jct	"	" "	1,287	19,974	*1.29680	43,645.35
189	Crescent Lake	"	Seeds & nuts	40	604	1.32548	1,513.11
168.5	Cross trunk jct	"	" "	18	180	1.61701	490.44
135	Fort Rock	"	" "	8	118	1.32548	211.15
189	Crescent Lake	"	Broccoli & lettuce	688	6,880	1.17075	15,223.50
189	" "	"	Canned goods	197	5,301	.78260	7,840.78
189	" "	"	Dried fruits	36	838	.93026	1,473.36
189	" "	"	Poultry	10	90	2.22116	377.82
189	" "	"	Eggs	254	3,561	1.97665	13,303.43
189	" "	"	Cattle	66	700	4.64462	6,144.83
168.5	Cross trunk jct	"	Sheep	344	3,509	1.28961	7,625.03
135	Fort Rock	"	Sheep	86	799	1.67103	1,802.46
168.5	Cross trunk jct	"	Wool	49	735	1.95440	2,420.49
135	Fort Rock	"	Wool	14	206	2.02941	564.38
168.5	Cross trunk jct	"	Bulbs	20	300	#1.32748	671.04
	Totals			3,374	47,784		114,033.88

*Composite average. (See detail figures.)
#Composite average. (See detail figures.)

2608 *Statement showing estimated tonnages and revenues created by proposed cross-State line in Oregon*—Continued

WESTBOUND TRAFFIC, THIRD YEAR

1 Distance over cross-State line	2 From—	3 To—	4 Commodity	5 Cars	6 Tons	7 Rate, per ton-mile (cents)	8 Revenue to cross-State line
189	Crane	Crescent Lake	Corn	578	20,230	0.61855	$23,650.07
189	"	" "	Feed	835	20,499	1.70520	66,064.75
189	"	" "	Hay	866	13,033	1.61293	39,730.29
168.5	"	Cross trunk jct	Apples	138	2,346	2.41800	9,558.38
168.5	"	" "	Potatoes	305	5,490	1.55443	14,379.49
33.5	Fort Rock	" "	"	60	1,080	*1.58126	572.10
189	Crane	Crescent Lake	"	35	630	1.70020	2,024.43
189	"	" "	Horses	24	271	2.54444	1,303.24
168.5	"	Cross trunk jct	"	24	264	2.49594	1,110.29
54	Fort Rock	Crescent Lake	"	13	145	*2.52155	197.44
33.5	" "	Cross trunk jct	"	12	134	*2.52155	113.19
168.5	Crane	" "	Cattle	515	6,432	1.90797	20,678.43
189	"	Crescent Lake	"	514	6,420	1.99584	24,217.12
33.5	Fort Rock	Cross trunk jct	"	57	713	2.42513	579.27
54	"	Crescent Lake	"	58	725	2.60945	1,021.60
168.5	Crane	Cross trunk jct	Sheep & hogs	390	3,845	3.10864	20,140.35
33.5	Fort Rock	" "	" "	11	108	*3.10864	112.47
189	Crane	Crescent Lake	" "	77	758	3.24824	4,653.49
54	Fort Rock	" "	" "	4	39	*3.24824	68.41
168.5	Crane	Cross trunk jct	Butter	74	1,124	4.09580	7,757.20
33.5	Fort Rock	" "	"	32	486	*4.09580	666.84
168.5	Crane	" "	Poultry	2	30	4.09594	207.05
33.5	Fort Rock	" "	Misc. (calves & hogs).	4	73	*1.75299	42.88
	Totals			4,628	84,875		238,848.78

*Average, same commodity, westbound, first year.

2609 *Third-year traffic, eastbound, alternate basis, deducting Klamath, Jackson, and Josephine a/c Alturas line*

1 Distance over cross-State line	2 From—	3 To—	4 Commodity	5 Cars	6 Tons	7 Rate, per ton-mile (cents)	8 Revenue cross-State line
189	Crescent Lake	Crane	Fresh fruits	257	3,989	1.42279	$10,7
189	" "	"	Seeds & nuts	40	604	1.32548	1,1
168.5	Cross trunk jct.	"	" " "	10	100	1.61701	2
135	Fort Rock	"	" " "	8	118	1.32548	2
189	Crescent Lake	"	Broccoli & lettuce	688	6,880	1.17075	15,2
189	" "	"	Canned goods	197	5,301	.78260	7,8
189	" "	"	Dried fruits	36	838	.93026	1,4
189	" "	"	Poultry	10	90	2.22116	3
189	" "	"	Eggs	254	3,561	1.97665	13,9
189	" "	"	Cattle	56	700	4.64462	6,4
168.5	Cross trunk jct.	"	Sheep	309	2,838	1.28961	6,5
135	Fort Rock	"	Sheep	86	799	1.67103	1,8
168.5	Cross trunk jct.	"	Wool	40	599	1.95976	1,7
135	Fort Rock	"	Wool	14	206	2.02941	5
	Totals			2,015	26,623		67,5

2610 *Statement showing estimated tonnages and revenues created by proposed cross-State line in Oregon*

EASTBOUND TRAFFIC, FOURTH YEAR

1 Distance over cross-State line	2 From—	3 To—	4 Commodity	5 Cars	6 Tons	7 Rate, per ton-mile (cents)	8 Revenue cross-State line
189	Crescent Lake	Crane	Fresh fruits	267	4,144	1.42279	$11,1
189	" "	"	Seeds and nuts	44	665	1.32548	1,6
168.5	Cross trunk jct.	"	" " "	14	140	1.61701	3
135	Fort Rock	"	" " "	13	191	*1.32548	3
189	Crescent Lake	"	Broccoli	843	8,430	1.17075	18,6
189	" "	"	Canned goods	219	5,893	.78260	8,7
189	" "	"	Dried fruits	42	978	.93026	1,7
189	" "	"	Poultry	10	90	2.22116	3
189	" "	"	Eggs	296	4,150	1.97665	15,5
189	" "	"	Cattle	66	700	4.64462	6,4
168.5	Cross trunk jct.	"	Sheep	309	3,152	1.28961	6,8
135	Fort Rock	"	Sheep	86	799	1.67103	1,8
168.5	Cross trunk jct.	"	Wool	40	600	1.95440	1,7
135	Fort Rock	"	Wool	14	206	2.02941	5
	Totals			2,263	30,138		75,8

* Average, same commodity, eastbound, first year.

2611 *Statement showing estimated tonnages and revenues created by proposed cross-State line in Oregon*—Continued

WESTBOUND TRAFFIC, FOURTH YEAR

1 Distance over cross-State line	2 From—	3 To—	4 Commodity	5 Cars	6 Tons	7 Rate, per ton-mile (cents)	8 Revenue to cross-State line
189	Crane	Crescent Lake	Corn	674	23,590	0.61855	$27,578.11
189	"	"	Feed	892	21,899	1.70520	70,576.71
189	"	"	Hay	948	14,267	1.61293	43,492.06
168.5	"	Cross trunk jct	Apples	173	2,941	2.41800	11,982.62
168.5	"	"	Potatoes	544	9,792	1.55443	25,647.35
33.5	Fort Rock	"	"	90	1,620	*1.58126	858.15
189	Crane	Crescent Lake	"	35	630	1.70020	2,024.43
189	"	"	Horses	27	305	2.54444	1,466.74
168.5	"	Cross trunk jct	"	28	308	2.49594	1,295.34
54	Fort Rock	Crescent Lake	"	13	145	*2.52155	197.44
33.5	"	Cross trunk jct	"	12	134	*2.52155	113.19
168.5	Crane	"	Cattle	593	7,407	1.90797	23,812.99
189	"	Crescent Lake	"	593	7,407	2.00618	28,084.98
33.5	Fort Rock	Cross trunk jct	"	65	812	2.42513	659.68
54	"	Crescent Lake	"	65	812	2.60945	1,144.19
168.5	Crane	Cross trunk jct	Sheep and hogs	580	5,719	3.10864	29,936.47
33.5	Fort Rock	"	"	18	177	*3.10864	184.34
189	Crane	Crescent Lake	Hogs	131	1,290	3.24824	7,919.53
54	Fort Rock	"	"	5	49	*3.24824	85.95
168.5	Crane	Cross trunk jct	Butter	111	1,686	4.09580	11,635.80
33.5	Fort Rock	"	"	48	729	*4.09580	1,000.28
168.5	Crane	"	Poultry	2	30	4.09594	207.05
33.5	Fort Rock	"	Misc. (calves and hogs).	4	73	*1.75299	42.88
	Totals			5,651	101,822		289,966.28

* Average, same commodity westbound, first year.

2612 *Statement showing estimated tonnages and revenues created by proposed cross-State line in Oregon*—Continued

EASTBOUND TRAFFIC, FIFTH YEAR

1 Distance over cross-State line	2 From—	3 To—	4 Commodity	5 Cars	6 Tons	7 Rate, per ton-mile (cents)	8 Revenue to cross-State line
189	Crescent Lake	Crane	Fresh fruits	278	4,368	1.42279	$11,745.87
189	"	"	Seeds and nuts	47	714	1.32548	1,788.68
168.5	Cross trunk jct	"	" " "	18	280	1.61701	762.91
135	Fort Rock	"	" " "	17	259	*1.32548	463.45
189	Crescent Lake	"	Broccoli	998	9,980	1.17075	22,082.92
189	"	"	Canned goods	251	6,766	.71855	9,188.63
189	"	"	Dried fruits	47	1,212	.93026	2,130.93
189	"	"	Poultry	10	90	2.22116	377.82
189	"	"	Eggs	338	4,740	1.97665	17,708.02
189	"	"	Cattle	66	700	4.64462	6,144.83
168.5	Cross trunk jct	"	Sheep	309	2,858	1.28961	6,210.41
135	Fort Rock	"	"	86	773	1.67103	1,743.80
168.5	Cross trunk jct	"	Wool	40	599	1.95440	1,972.61
135	Fort Rock	"	"	14	206	2.02941	564.38
	Totals			2,519	33,545		82,885.26

* Average, same commodity, eastbound, first year.

2612 *Statement showing estimated tonnages and revenues created by proposed cross-State line in Oregon*—Continued

2613 WESTBOUND TRAFFIC, FIFTH YEAR

1 Distance over cross-State line	2 From—	3 To—	4 Commodity	5 Cars	6 Tons	7 Rate, per ton-mile (cents)	8 Revenue to cross-State line
189	Crane	Crescent Lake	Corn	770	26,950	0.61855	$31,506.15
189	"	" "	Feed	947	23,078	1.70520	74,376.43
189	"	" "	Hay	1,030	15,505	1.61293	47,266.08
168.5	"	Cross trunk jct	Apples	173	2,933	2.41800	11,950.01
168.5	"	" "	Potatoes	687	12,505	1.55443	32,783.23
33.5	Fort Rock	" "	"	120	2,152	*1.58126	1,139.96
189	Crane	Crescent Lake	"	35	630	1.70020	2,094.42
189	"	" "	Horses	27	300	2.54444	1,442.70
168.5	"	Cross trunk jct	"	28	311	2.49594	1,307.96
54	Fort Rock	Crescent Lake	"	13	145	*2.52155	197.44
33.5	" "	Cross trunk jct	"	12	134	*2.52155	113.19
168.5	Crane	" "	Cattle	615	7,676	1.90797	24,677.30
189	"	Crescent Lake	"	614	7,663	1.99584	28,905.89
54	Fort Rock	" "	"	73	911	2.60945	1,293.69
33.5	" "	Cross trunk jct	"	73	911	2.42513	740.11
168.5	Crane	" "	Sheep & hogs	670	6,650	3.10864	34,833.09
33.5	Fort Rock	" "	"	23	228	*3.10864	237.44
189	Crane	Crescent Lake	Hogs	162	1,608	3.24824	9,871.79
54	Fort Rock	" "	"	8	80	*3.24824	140.22
168.5	Crane	Cross trunk jct	Butter	129	1,954	4.09580	13,485.26
33.5	Fort Rock	" "	"	64	958	*4.09580	1,314.67
168.5	Crane	" "	Poultry	2	30	4.09594	207.05
33.5	Fort Rock	" "	Misc. (calves & hogs).	4	73	*1.75299	42.87
	Totals			6,279	113,385		319,817.67

* Average, same commodity, westbound, first year.

2614 TARIFF REFERENCES AND AUTHORITIES

E. B. T. C. F. B. trf. 2-V I. C. C. 1186.
Amer. Ry. Exp. blk. trf. A-3 and 6-D I. C. C. 3333.
Un. Pac. T. T. trf. 6013-A I. C. C. 3460.
Sou. Pac. trf. 608-F I. C. C. 4584.
N. P. C. F. B. trf. 19-C I. C. C. 233.
E. B. T. C. F. B. trf. 33-C I. C. C. 1196.
W. B. T. C. F. B. trf. 4-Z I. C. C. 1194.
N. P. C. F. B. trf. 42 I. C. C.-P. S. C. Or. 109.
N. P. C. F. B. trf. 12-C I. C. C. 232 P. S. C. Or. 204.
Pac. F. T. B. trf. 23-G I. C. C. 907.
Un. Pac. R. R. trf. 6033-B I. C. C. 3793.
Un. Pac. R. R. trf. 6032 I. C. C. 3472.
Un. Pac. R. R. trf. 6011-A I. C. C. 3596.
Un. Pac. R. R. trf. 6010-C I. C. C. 3728.
Sou. Pac. distance table.
O. W. R. & N. distance table.
O. S. L. R. R. distance table.
Official Guide.
Proposed cross-State line distances—P. S. C. Or. engr. data.

2615 *Grand recapitulation showing estimated tonnages and revenues created by proposed cross-State line in Oregon, eastbound and westbound traffic, first, second, third, fourth, and fifth years (including Klamath, Jackson, and Josephine Counties)*

	Total number of carloads	Total number of tons	Revenues to cross-State line
Eastbound:			
First year	2,366	32,933	$82,898.02
Second year	*2,870	*40,359	*98,465.95
Third year	3,374	47,784	114,033.88
Fourth year	2,263	30,138	75,840.34
Fifth year	2,519	33,545	82,885.26
Total	13,392	184,759	454,123.45
Westbound:			
First year	3,777	67,168	201,431.53
Second year	*4,203	*76,022	*220,140.16
Third year	4,628	84,875	238,848.78
Fourth year	5,651	101,822	289,966.28
Fifth year	6,279	113,385	319,817.47
Total	24,538	443,272	1,270,204.22
Total eastbound and westbound:			
First year	6,143	100,101	284,328.55
Second year	7,073	116,381	318,606.11
Third year	8,002	132,659	352,882.66
Fourth year	7,914	131,960	365,806.62
Fifth year	8,798	146,930	402,702.73
Grand total (eastbound and westbound)	37,930	628,031	1,724,327.67

* Average of first and third years.

2616 *Grand recapitulation, alternate basis, showing estimated tonnages and revenues created by proposed cross-State line in Oregon, eastbound and westbound traffic, excluding Klamath, Jackson, and Josephine Counties, first, second, third, fourth, and fifth years*

	Total number of carloads	Total number of tons	Revenues to cross-State line
Eastbound:			
First year	1,505	19,822	$54,486.20
Second year	*1,760	*23,223	*61,042.58
Third year	2,015	26,623	67,598.96
Fourth year	2,263	30,138	75,840.34
Fifth year	2,519	33,545	82,885.26
Total	10,062	133,351	341,853.34
Westbound:			
First year	3,777	67,168	201,431.53
Second year	*4,203	*76,022	*220,140.16
Third year	4,628	84,875	238,848.78
Fourth year	5,651	101,822	289,966.28
Fifth year	6,279	113,385	319,817.47
Total	24,538	443,272	1,270,204.22
Total eastbound and westbound:			
First year	5,282	86,990	255,917.73
Second year	5,963	99,245	281,182.74
Third year	6,643	111,498	306,447.74
Fourth year	7,914	131,960	365,806.62
Fifth year	8,798	146,930	402,702.73
Grand total (eastbound and westbound)	34,600	576,623	1,612,057.56

* Average of first and third years.

2617

Exhibit 33.—Witness Baker

Pears, Rogue River Valley, season, 1927

Destination	No. cars	Net weight	Rate	Total revenue	Mileage	Total mileage
Alabama:						
Montgomery	1	26,520	1.73	$458.79	3,127	3,127
Birmingham	5	132,600	1.73	2,293.98	3,164	15,820
Connecticut:						
New Haven	8	212,160	1.73	3,670.37	3,473	27,784
Hartford	9	238,680	1.73	4,129.16	3,436	30,924
Bridgeport	8	212,160	1.73	3,670.37	3,490	27,920
D. C.:						
Washington	8	212,160	1.73	3,670.37	3,310	26,480
Florida:						
Key West	2	53,040	1.875	994.50	3,883	7,766
Illinois:						
Chicago	90	1,386,800	1.73	41,291.64	2,487	223,830
Indiana:						
Indianapolis	2	53,040	1.73	917.59	2,671	5,342
Iowa:						
Des Moines	3	79,560	1.73	1,376.39	1,984	5,952
Kentucky:						
Louisville	2	53,040	1.73	917.59	2,792	5,584
Louisiana:						
New Orleans	22	583,440	1.73	10,093.51	2,809	61,798
Maryland:						
Baltimore	11	291,720	1.73	5,046.75	3,312	36,432
Mass.:						
Boston	34	901,680	1.73	15,599.06	3,525	119,850
Springfield	6	159,120	1.73	2,752.78	3,411	20,466
Michigan:						
Detroit	31	822,120	1.73	14,222.68	2,456	76,136
Ishpeming	3	79,650	1.73	1,376.39	2,439	7,317
Minnesota:						
Mankato	1	26,520	1.73	458.79	2,250	2,250
St. Paul	1	26,520	1.73	458.79	2,164	2,164
Missouri:						
Kansas City	13	344,760	1.73	5,964.35	2,276	29,588
Nebraska:						
Omaha	4	106,080	1.73	1,835.18	1,870	7,480
New York:						
N. Y. City	930	24,663,600	1.73	426,680.28	3,485	3,241,050
Buffalo	15	397,800	1.73	6,881.94	2,898	43,470
New Jersey:						
Jersey City	31	822,120	1.73	14,222.68	3,485	108,035
Hoboken	1	26,520	1.73	458.79	3,485	3,485
North Carolina:						
Rocky Mount	1	26,520	1.73	458.79	3,540	3,540
Ohio:						
Akron	2	53,040	1.73	917.59	2,861	5,722
Cleveland	20	530,400	1.73	9,175.90	2,827	56,540
Youngston	12	318,240	1.73	5,537.38	2,914	34,968
Penn.:						
Philadelphia	65	1,723,800	1.73	29,821.74	3,175	206,375
Pittsburg	26	689,520	1.73	11,928.70	2,992	77,792
Wilkes-Barre	4	106,080	1.73	1,835.18	3,355	13,420
Altoona	1	26,520	1.73	458.79	3,106	3,106
Charlerol	1	26,520	1.73	458.79	3,033	3,033
Texas:						
San Antonio	2	53,040	1.73	917.59	2,236	4,472
Tennessee:						
Memphis	3	79,560	1.73	1,376.39	2,834	8,502
Virginia:						
Roanoke	1	26,520	1.73	458.79	3,370	3,370
Norfolk	2	53,040	1.73	917.59	3,470	6,940
Wisconsin:						
Green Bay	1	26,520	1.73	458.79	2,466	2,466
La Cross	2	53,040	1.73	917.59	2,307	4,614
Canada:						
Montreal	47	1,246,440	1.875	22,370.00	3,020	141,940
Toronto	15	397,800	1.875	7,458.75	3,002	45,030
Quebec	8	212,160	1.875	3,978.00	3,183	25,464
Total	1,454	37,560,080	------	668,889.07	------	4,787,688
Average haul	------	------	------	------	------	3,292.7

2618 *Exhibit 34—Newell*

Potential net earnings of carriers, by Alturas route, compared with those of cross-State route, if cost is calculated on basis of three mills per gross ton-mile

I. ON CAR FIR LUMBER FROM EUGENE, DESTINED OMAHA

Freight charge 70,000 lbs. @ 62½¢	$437.50
Via Alturas:	
Southern Pacific—	
Eugene to Ogden, earnings	253.75
Cost, 984 miles x 56 tons x $.003	165.31
Net earnings	88.44
Union Pacific—	
Ogden to Omaha, earnings	183.75
Cost, 990 miles x 56 tons x $.003	166.32
Net earnings	17.43
Net, per mile	1.76¢
Via Crane:	
Southern Pacific—	
Eugene to Crescent Lake—	
Cost, 96 miles x 56 tons x $.003	$16.13
Net as above	88.44
Gross required to produce same net	104.57
Balance of total charge	332.93
Union Pacific—	
Cost, 1,659 miles x 56 tons x $.003	278.71
Net earnings	54.22
Net, per mile	3.27¢

II. ON CAR FIR LUMBER DESTINED BEYOND OMAHA

Freight earnings 70,000 lbs. @ 55¢	$385.00
Via Alturas:	
Southern Pacific—	
Eugene to Ogden, earnings	224.00
Cost, 984 miles x 56 tons x $.003	165.31
Net earnings	58.69
Union Pacific—	
Ogden to Omaha, earnings	161.00
Cost, 990 miles x 56 tons x $.003	166.32
Net loss	5.32
Loss, per mile	0.54¢
Via Crane:	
Southern Pacific—	
Eugene to Crescent Lake—	
Cost, 96 miles x 56 tons x $.003	$16.13
Net as above	58.69
Gross required to produce same net	74.82
2619 Union Pacific—	
Balance of freight charge	310.18
Cost, 1,659 miles x 56 tons, x $.003	278.71
Net earnings	31.47
Net per mile	1.90¢

(Compare page 111a, Exhibit 16.)

III. ON CAR PINE LUMBER FROM KLAMATH FALLS, DESTINED OMAHA

Freight earnings 51,000 lbs. @ 62½¢	$318.75
Via Alturas:	
Southern Pacific—	
Klamath Falls to Ogden, earnings	184.88
Cost, 790 miles x 46.5 tons x $.003	110.21
Net earnings	74.67
Union Pacific—	
Ogden to Omaha, earnings	133.87
Cost, 990 miles x 46.5 tons x $.003	138.10
Net loss	4.23
Via Crane:	
Southern Pacific—	
Klamath Falls to Chemult—	
Cost, 74 miles x 46.5 tons x $.003	10.32
Net as above	74.67
Gross required to produce same net	84.99
Union Pacific—	
Chemult to Omaha—	
Balance of freight charge	233.76
Cost, 1656 miles x 46.5 tons x $.003	231.01
Net earnings	2.75
Increase of net	6.98

IV. ON CAR PINE LUMBER FROM KLAMATH FALLS, DESTINED OMAHA

Freight earnings 51,000 lbs. @ 55¢	$280.50
Via Alturas:	
Southern Pacific—	
Klamath Falls to Ogden, earnings	162.69
Cost, 790 miles x 46.5 tons x $.003	110.21
Net earnings	52.48
Union Pacific—	
Ogden to Omaha, earnings	117.81
Cost, 990 miles x 46.5 tons x $.003	138.10
Net loss	20.29
2620 Via Crane:	
Southern Pacific—	
Klamath Falls to Chemult—	
Cost, 74 miles x 46.5 x $.003	10.32
Net as above	52.48
Gross required to produce same net	62.80
Union Pacific—	
Chemult to Omaha—	
Balance of freight charge	217.70
Cost, 1,656 miles x 46.5 tons x $.003	231.10
Net loss	13.31
Decrease of net loss	6.98

2621 *Exhibit 35—Newell*

Potential net earnings of carriers by Alturas route compared with those of cross-State line, using constructive mileage and operating ratios to determine cost

The operating ratio for the Southern Pacific system in 1925 was 71%, and for the State of Oregon 87%. Since about 18% of the distance from Eugene via Roseville to Ogden is in Oregon I take the operating ratio for this haul as 74%. The Oregon Short Line ratio for the same year was 71%.

I allow constructive mileage of 125 miles to the Southern Pacific for origination and 100 to the Union Pacific for delivery; also 97 miles for the heavy grades of the Sierra Nevada Mountains between Rocklin and Tuckee, and 46 miles for the Cascade Mountains between Westfir and Cascade Summit. This makes respective mileages as follows:

Eugene–Roseville–Ogden	1,462 miles.
Eugene–Alturas–Ogden	1,155 "
Eugene–Crescent Lake	142 "
Ogden–Omaha	1,090 "
Crescent Lake–Omaha	1,759 "

These calculations are confined to the haul of lumber from Eugene.

I. CAR DESTINED OMAHA

Freight charges 70,000 lbs. @ 62½¢	$437.50

The Southern Pacific share in the joint rates is based on the haul via Roseville and I therefore use that as the basis of its cost per mile. Its share in the above rate would be $253.75. At an operating ratio of 74%, its cost would be $187.78, or for the above constructive mileage 12.84¢ per mile.

Via Alturas:	
Southern Pacific—	
Eugene to Ogden, earnings	$253.75
Cost, 1,155 miles @ 12.84¢	148.30
Net	105.45
2622 *Union Pacific*—	
Ogden to Omaha, earnings	183.75
Cost, $183.75 x 71%	130.46
Net	53.29
Net per mile (990)	5.38¢
Cost per mile (1,090)	11.97¢
Via Crane:	
Southern Pacific—	
Eugene to Crescent Lake—	
Cost, 142 miles @ 15.10¢ (87% op. ratio)	$21.44
Net as above	105.45
Gross required to produce same net	126.89
Union Pacific—	
Crescent Lake to Omaha, earnings	310.61
Cost, 1,759 miles @ 11.97¢	210.55
Net	100.06
Net per mile (1,659)	6.03¢
Increase in net per mile	0.65¢

II. CAR DESTINED BEYOND OMAHA

Freight earnings 70,000 lbs. @ 55¢	$385.00
Cost via Roseville = $224 x 74%	165.76
Cost per constructive mile	11.34¢
Via Alturas:	
Southern Pacific—	
Eugene to Ogden, earnings	$224.09
Cost, 1,155 miles @ 11.34¢	130.98
Net	93.02
Union Pacific—	
Ogden to Omaha, earnings	161.00
Cost, $161 x 71%	114.31
Net earnings	46.69
Net per mile (990)	4.72¢
Cost per mile (1,090)	10.49¢
Via Crane:	
Southern Pacific—	
Eugene to Crescent Lake—	
Cost, 142 miles x 13.33¢ '87% ratio	$18.93
Net as above	93.02
Gross required to produce net	111.95
Union Pacific—	
Crescent Lake to Omaha, earnings	273.00
Cost, 1,759 miles @ 10.49¢	184.51
Net earnings	88.49
Net per mile (1,659)	5.34¢
Increase in net per mile	0.62¢

2623 *Exhibit 36—Newell*

Car fir lumber, Eugene to Omaha via Portland 56 tons

Southern Pacific:	
Eugene to Portland, load—	
123 miles. Equivalent rise per mile, 8.9 ft. Add locomotive weight as for empty south, 2.9 tons—	
Train miles, 123 ÷ 56 x 63.8¢	$1.40
Car mile, 123 x 2.59¢	3.13
Gross ton-mile, 123 x 62.1 T. x .02¢	1.53
Resistance, 59.2 T. x 1,090 x .00496¢	3.24
Add 9%	0.84
	10.15
Portland to Eugene, empty:	
123 miles. Equiv. rise per mile, 27.3 ft. Loco. weight, 27.3 x 21 x .0051 = 2.9 tons—	
Train and car mile as above	4.58
Gross ton-mile, 123 x 27.1 T. x .02¢	0.67
Resistance 24.2 T. x 3360 x .00496¢	4.03
Add 9%	0.84
	10.12

Summary:	
Southern Pacific—	
Eugene to Portland, load	$10.15
Portland to Eugene, empty, $10.12 x 60%	6.07
Origination at Eugene, as on page 69, Ex. 16	12.00
Interchange at Portland	5.06
Total Southern Pacific	33.28
Union Pacific—	
Portland to Omaha, load	185.89
Omaha to Portland, empty, 139.14 x 60%	83.48
Interchange at Portland	5.06
Delivery at Omaha, page 71, Ex. 16	9.50
	283.93
Total Eugene to Omaha via Portland	$317.21
Eugene to Omaha via Roseville (p. 71)	$372.40
Eugene to Omaha via Alturas (p. 73)	$323.90
Eugene to Omaha via Crane (p. 75)	$290.90

2624 *Exhibit 38*

[Addition to Exhibit No. 24. City of Bend and the Bend Chamber of Commerce. To be inserted following page number 8]

THE SHEVLIN-HIXON COMPANY,
Bend, Oregon, August 13th, 1928.

Mr. L. K. CRAMB,
Secretary Bend Chamber of Commerce,
Bend, Oregon

DEAR SIR: Attached is a statement of cars shipped during the year 1927 shipped via the Union Pacific Railway showing the approximate distribution as to States.

For your information, in the case of the States of Iowa and Minnesota, and more particularly Iowa, the Union Pacific was short hauled on a goodly portion of the number of cars shown. This was brought about by the position taken by the C. M. & St. P. & R. Ry. on milling in transit on lumber which went into effect early last year, which created for them a considerable volume of business going to factories buying shop lumber on the Mississippi, and in Minnesota and Wisconsin, this U. P. short-hauled business going to the Milwaukee at Marengo, Wash. The figures in the statement might vary a little if subjected to an actual check, but think they are reasonably accurate and will serve the purpose.

Very truly yours,

THE SHEVLIN-HIXON COMPANY,
C. J. MONAHAN,
Asst. Traffic Mgr.

2625 *The Shevlin-Hixon Company, Bend, Oregon—Statement of approximate distribution of cars, by States, shipped during year 1927, via the Union Pacific system*

State:	Number cars
California	5
Colorado	90
Connecticut	33
Delaware	1
Dist. of Columbia	4
Export	4
Idaho	36
Illinois	115
Indiana	15
Iowa	505
Kansas	85
Maryland	3
Massachusetts	23
Michigan	60
Minnesota	130
Missouri	80
Maine	6
Nebraska	54
New York	149
Nevada	4
New Jersey	56
New Hampshire	6
New Mexico	1
Ohio	75
Oregon	30
Oklahoma	18
Pennsylvania	165
Rhode Island	3
South Dakota	22
South Carolina	
Texas	2
Utah	221
Vermont	3
Virginia	3
West Virginia	3
Wisconsin	62
Washington	13
Wyoming	75
Total	2,160

2626 BROOKS-SCANLON LUMBER CO.,
Bend, Oregon, August 14, 1928.

Mr. L. K. CRAMB,
Sec., Bend Chamber of Commerce,
Bend, Oregon.

DEAR SIR: In reply to your request for data on the movement of our shipments out of Bend during the year 1927 we regret that the manner in which our records are kept makes it impractical, in the limited time at our disposal, to furnish you a list of the cars shipped by us last year into the different States over the Union Pacific System. Many of our shipments are billed out of Bend showing a destination of Omaha, Minneapolis, or Chicago, and are diverted or reconsigned by the consignee to points further east. The final destination ordinarily being of no concern to us as we are interested in the payment of freight only to the point to which the shipment was originally consigned.

During the year 1927 we shipped 4,155 carloads and we find that of this total approximately 40%, or 1,662 cars, were routed in connection with the Union Pacific System. Of the total shipments approximately 57%, or 2,370 cars, were consigned to Chicago and points east; of these shipments approximately 50%, or 1,185 cars, were handled by the Union Pacific System.

The Union Pacific naturally carries the bulk of our business shipped into the States of Utah, Colorado, Nebraska, and Kansas, as many of our shipping points in these States are located on their tracks. During the past year the bulk of our shipments into the State of Iowa were handled in connection with the O. W. R. & N., particularly to points along the Mississippi River. The northern lines, namely, the Northern Pacific and the Great Northern, during the past year handled the bulk of our shipments into the States of Minnesota, Wisconsin, North

Dakota, and Montana, which is the natural territory of these roads, as well as the eastern shipments routed across the Great Lakes. We find that during the year 1927 each of the last-named railroads handled approximately 30% of our tonnage and the Union Pacific System carried the balance, or as stated above, approximately 40%.

Regretting that we are unable to give you the information requested in detail and trusting the above will be of some assistance, we are,

Yours very truly,

BROOKS-SCANLON LUMBER COMPANY,
H. E. ALLEN, *Assistant Manager.*

[Copy.]

2627 *Exhibit 50—Buck*

Crops	Harney Valley irrigation district	Harney County	All irrigated land in Oregon
Wheat	20 to 40 bushels	9 bushels	17.8 bushels.
Oats	40 to 80 "	13½ "	29.5 "
Barley	30 to 70 "	15 "	28.5 "
Rye	10 to 25 "	5 "	9.6 "
Potatoes	80 to 150 "		
Marsh hay	½ to 1 ton	1¼ tons	0.97 tons.
Alfalfa	3 to 5 tons	2 "	3.02 "
Clover		2 "	1.86 "
Timothy		1 "	1.32 "

2628 *Exhibit 51—Buck*

Estimate of cost, Crane to Crescent Lake, 185.0 miles

PORTLAND, OREGON, *October, 1927.*

Account number					
1.	Engineering:				
	5% of $9,069,998			$453,500	$455,500
2.	Land for transportation purposes:				
	Sage brush timberland	2,595 Ac.	@ $10.00	25,950	
	Meadow land	320 "	50.00	16,000	41,950
3.	Grading:				
	Clearing sage	1,320 "	10.00	13,200	
	Clearing pine	845 "	50.00	42,250	
	Excavation:				
	Common	784,050 C. Y.	0.35	275,617	
	Medium	153,808 "	0.70	107,665	
	Solid rock	723,950 "	1.30	941,135	
	Borrow:				
	Common	3,765,270 "	0.35	1,317,844	
	Overhaul, 1 sta	9,683,000 "	0.02	193,660	
	Overbreak, ditches, loss by wind, etc	10%		264,230	
	Freights and fares	185 mi.	400.00	74,000	3,229,601
6.	Bridges, trestles, and culverts:				
	Pile trestles	4,100 L. F.	25.00	102,500	
	Concrete pipe—18"	1,800 "	3.45	6,210	
	" " 24"	5,600 "	4.60	25,760	
	" " 36"	2,400 "	7.80	18,720	
	Arch culverts	2,791 C. Y.	30.00	83,730	
	Haul from cars to line			115,440	355,360
8.	Ties:				
	Treated cross ties	596,000 ea.	1.75	1,043,000	
	" switch ties	348,720 MBM	28.61	9,977	
		Purchase expense		6,179	
	Freight	45,657 tons	3.61	164,822	1,223,978

Account number						
2629	9. Rail:					
	90 lb. new ARA rail	29,780	G. T. @	$58.65	$1,746,597	
	Purchasing expense				12,805	$1,759,402
	10. Other track material:					
	Frogs and switches—					
	No. 10 S. R. frogs 90#	54	ea. @	115.68	6,247	
	No 9 rigid frogs 90#	60	"	75.11	4,507	
	16'6" split switches, comp. 90#	54	ea.	131.90	7,123	
	15'-0" split switches, comp. 90#	60	"	98.11	5,887	
	8'-3" guard rails comp	226	"	21.07	4,762	
	90# cont. joints	9.2	N. T.	90.00	828	
	90# angle bars	8.2	N. T.	59.20	485	
	Track spikes	11.8	N. T.	71.40	842	
	Track bolts	1.4	N. T.	98.40	138	
	Nut locks	2.0	M	43.08 M	86	
	High switch stands	54	ea.	21.96	1,186	
	Low switch stands	60	"	20.65	1,239	
	Switch lamps	9.7	doz.	108.09 doz.	1,048	
	Switch locks	6	"	7.50 "	45	
	Tie plates, 90#	1,047,500		.28 ea.	293,300	
	Track fastenings—					
	Continuous joints 27"	2,700	N. T. @	90.00	243,000	
	Angle bars	140	"	59.20	8,288	
	Bolts	183	"	98.40	18,007	
	Nut locks	239	M	43.08	10,296	
	Spikes	930	N. T.	71.40	66,402	
	Anti creepers	135,000		.30	40,500	
	Purchase exp.				3,569	717,785
	11. Ballast:					
	Ballast	474,060	C. Y. @	.70	331,842	331,842
2630	12. Track laying and surfacing:					
	Laying and surfacing	197	mi. @	2,700.00	531,900	
	Laying yard tracks	5	"	2,700.00	13,500	
	Laying & surfacing turnouts	108	ea.	100.00	10,800	556,200
	13. Right of way fence:					
	Single fence	370	mi. @	321.00	118,770	
	Steel cattle guards	160	ea.	35.00	5,600	
	Wood farm gates	70	ea.	10.00	700	
	Wing fences	160	ea.	10.00	1,600	126,670
	14. Crossings and signs:					
	Signs	185	mi. @	25.00	4,625	
	Road crossings	115	ea.	40.00	4,600	9,225
	16. Stations and office buildings:					
	Passenger depots	6	ea. @	5,000.00	30,000	
	Coal houses	6	"	150.00	900	
	Water supply	6	"	1,500.00	9,000	
	Out houses	6	"	140.00	840	
	Stock yards	6	"	2,500.00	15,000	55,740
	17. Roadway buildings:					
	Section house Bunk house Tool house Out house	14	ea. @	6,000.00	84,000	84,000
	18. Water stations:					
	65,000 gal. tank, well & pump	7	ea. @	12,000	84,000	
	125,000 gal. tank, well & pump	2	"	18,000	36,000	
	10% contingencies				12,000	132,000

Account number						
2621	19. Fuel stations:					
	Coaling stations	2 ea.	@	$44,000	$86,000	
	Coal dock	1 "	@	1,750	1,750	$89,750
	20. Shops and engine houses:					
	Engine houses, 2 stall	3 ea.	@	12,750	38,250	
	Heating plant	1 "	@	6,500	6,500	
	Cinder Pits	3 "	@	6,500	19,500	
	Shop building 20 x 40	1 "	@	5,000	5,000	
	Oil and storehouse	3 "	@	6,600	19,800	
	Sand house and dryer	3 "	@	1,600	4,800	
	Foreman's office locker room	1 "	@	1,000	1,000	94,850
	26. Telegraph and telephone lines:					
	185 miles		@	710	131,350	131,350
	37. Roadway machines:					
	14 sets		@	425	5,950	
	Store expense				745	6,695
2632	38. Roadway small tools:					
	14 sets		@	400.00	5,600	
	Store expense				700	6,300
	44. Shop machinery:					
	1—location		@	10,000	10,000	10,000
	73. Law:					
	185 miles		@	200.00	37,000	37,000
	74. Taxes:					
	185 miles		@	380.00	70,300	70,300
	Chg. contingencies 10%				906,999	906,999
	Chg. interest 6%				625,830	625,830
	Total					11,056,327
	Cost per mile					59,764

2633 *Estimated cost of construction of the proposed line in central Oregon, Crane to Crescent Lake*

Line	Distance	Cost	Cost per mile
	Miles		
Crane to Crescent Lake	185.0	$11,056,327	$59,764
Total	185.0	11,056,327	59,764

2634 *Table showing amount and cost of train equipment necessary to operate proposed line from Crane to Crescent Lake, for the first five years of operation*

5 engines, consolidation @ $40,000	$200,000
4 combination mail baggage and express @ $18,000	72,000
4 " coach and smoking @ $25,000	100,000
80 freight cars @ $2,550	204,000
1 combination ditcher and pile driver	30,000
1 (20-yd.) air dump car	3,750
1 rotary snow plow	50,000
Four sets pilot plows and flangers	1,600
	661,350

2635 Nos. 1 and 2.

Exhibit 53—Cornwall

Oregon softwood production

[M feet]

Year	Douglas fir	Pine	Other species	Total	Mills
1920	2, 347, 368	635, 098	323, 997	3, 306, 463	[illegible]
1921	1, 528, 198	311, 469	178, 819	2, 018, 486	[illegible]
1922	2, 103, 586	558, 162	356, 547	3, 018, 295	[illegible]
1923	2, 752, 495	796, 619	411, 779	3, 960, 893	[illegible]
1924	2, 478, 583	748, 210	433, 398	3, 660, 191	[illegible]
1925	2, 792, 432	1, 008, 230	328, 934	4, 209, 596	[illegible]
1926	2, 987, 747	1, 037, 867	429, 121	4, 454, 735	[illegible]

Washington softwood production

[M feet]

Year	Douglas fir	Pine	Other species	Total	Mills
1920	4, 275, 017	374, 624	873, 127	5, 522, 768	[illegible]
1921	2, 889, 543	287, 770	654, 178	3, 831, 491	[illegible]
1922	4, 414, 104	388, 181	1, 031, 871	5, 834, 156	[illegible]
1923	5, 047, 712	410, 768	1, 213, 904	6, 672, 384	[illegible]
1924	4, 597, 213	419, 861	1, 244, 978	6, 262, 052	[illegible]
1925	4, 912, 204	531, 862	1, 580, 079	7, 024, 145	[illegible]
1926	5, 409, 968	535, 150	1, 601, 207	7, 546, 325	[illegible]

Idaho softwood production

[M feet]

Year	Douglas fir	Pine	Other species	Total	Mills
1920	105, 786	628, 138	234, 274	968, [illegible]68	[illegible]
1921	55, 354	372, 747	113, 574	541, 669	[illegible]
1922	58, 707	593, 011	206, 819	857, 537	[illegible]
1923	106, 453	748, 432	217, 334	1, 072, 219	[illegible]
1924	86, 214	720, 142	210, 778	1, 017, 134	[illegible]
1925	139, 501	764, 272	236, 337	1, 140, 110	[illegible]
1926	106, 607	656, 732	184, 132	947, 471	[illegible]

2636 Nos. 3 and 4.

Export and domestic waterborne shipments, 1920–1926

[M feet]

Year	Washington	Oregon	Idaho	Year	Washington	Oregon	Idaho
1920	1, 016, 812	677, 354	.....	1924	2, 759, 590	1, 199, 539	.....
1921	1, 111, 709	662, 813	.....	1925	3, 055, 698	1, 242, 920	.....
1922	2, 179, 167	947, 215	.....	1926	3, 552, 929	1, 294, 391	.....
1923	3, 402, 316	1, 133, 749	.....				

FOREIGN MARKETS SERVED BY WATER

Australia
South America
China.
Japan.
Mexico.
Africa
England.
Europe.
Central America.
India.

DOMESTIC MARKETS SERVED BY WATER

Hawaii.
Philippines.
Alaska.
California.
Atlantic coast.
Gulf ports.

Percentages of rail and water shipments, 1920–1926

Year	Washington		Oregon		Idaho		Year	Washington		Oregon		Idaho	
	Rail	Water	Rail	Water	Rail	Water		Rail	Water	Rail	Water	Rail	Water
1920	82	18	72	25	100	0	1924	56	44	67	33	100	0
1921	70	30	68	32	100	0	1925	57	43	70	30	100	0
1922	63	37	69	31	100	0	1926	52	48	71	29	100	0
1923	50	50	73	27	100	0							

2637 No. 5.

Railroad service since 1923 has handled tonnage offered at reasonable dispatch.

No. 6 and 7.

Sawmills established in Oregon, Washington, and Idaho since 1922

Name of mill	Location	Daily capacity (M feet)
Forest Lumber Co	Pine Ridge, Ore	150
Owen-Oregon Lumber Co	Medford, Ore	250
Oregon-American Lumber Co	Vernonia, Ore	250
Mount Emily Lumber Co	La Grande, Ore	160
Pacific Spruce Corporation	Toledo, Ore	400
Southeast Portland Lumber Co	Portland, Ore	100
J. H. Chambers & Son	Cottage Grove, Ore	100
Walter A. Woodard Lumber Co	Cottage Grove, Ore	100
Western Lumber Co	Westfir, Ore	150
Long-Bell Lumber Co. (2 mills)	Longview, Wash	850
Reed Mill Co. (2 mills)	Shelton, Wash	200
Henry McCleary Timber Co	Shelton, Wash	250
E. K. Wood Lumber Co	Anacortes, Wash	150
St. Paul & Tacoma Lumber Co	Tacoma, Wash	100
Columbia River Paper Mills	Vancouver, Wash	150
White Pine Sash Co	Kettle Falls, Wash	100
Hedlund Lumber & Box Co	Republic, Wash	75
Dubois-Matlock Lumber Co	Vancouver, Wash	40
Dubois-Kettering Lumber Co	Rainier, Ore	40
Hallack & Howard Lumber Co	New Meadows, Idaho	125
Clearwater Timber Co	Lewiston, Idaho	400
Weyerhaeuser Timber Co. (mill "C")	Everett, Wash	150
New Grande Rond Lumber Co	Grand Ronde, Ore	50
Gebhardt-Klees Lumber Co	Willamina, Ore	40
Tomlin Box Co	Medford, Ore	40
Umpqua Mills & Timber Co	Reedsport, Ore	100
Griswold-Grier Lumber Co	Philomath, Ore	50
R. L. Stanwood Lumber Co	Brownsville, Ore	30
W. J. Conrad Lumber Co	Marshfield, Ore	40
Carlton Manufacturing Co	Carlton, Ore	50
Biles-Coleman Lumber Co	Omak, Wash	125
Milton Box Co	Milton, Ore	70
Oerding Industries, Inc	Coquille, Ore	30

2638 No. 8.

New sawmills under construction, 1928

Name of mill	Location	Daily capacity (M feet)
Kinzua Pine Mills Co	Condon, Ore	100
Weyerhaeuser Timber Co	Klamath Falls, Ore	400
Weyerhaeuser Timber Co	Longview, Wash	800
Glendale Lumber Co	Glendale, Ore	125
Western Empire Lumber Co	Empire, Ore	250

Nos. 9 and 10.

Sawmills projected

Name of company	Location	Daily capacity (M feet)
Edward Hines Lumber Co	Burns, Ore	200
Kesterson Lumber Co	Klamath Falls, Ore	100
Deschutes River Pine Co	Kaskela, Ore	75
Anderson & Middleton Lumber Co	Cottage Grove, Ore	250
Frank Boutin	Lakeview, Ore	100
A. H. Fairchild & Associates	The Dalles, Ore	75
Mount Emily Lumber Co	La Grande, Ore	100

No. 11.

Operating capacity as of July 15, 1928, is about 75% based on curtailment and upon mills not running this year.

2639 No. 12.

Mills shut down or suspended operations since January 1, 1922

Name of company	Location	Daily capacity (M feet)
C. & O. Lumber Co	Brookings, Ore	200
*Stout Lumber Co	North Bend, Ore	200
Silverton Lumber Co	Silverton, Ore	100
Coos Bay Lumber Co. (mill B)	Marshfield, Ore	125
E. E. Johnson	Coquille, Ore	75
North Pacific Lumber Co	Portland, Ore	250
Dollar-Portland Lumber Co	Portland, Ore	250
Coast Range Lumber Co	Mabel, Ore	150
Mickle Mills	North Portland, Ore	250
Wind River Lumber Co	Cascade Locks, Ore	100
Beaver-Linnton Lumber Co	Portland, Ore	125
Great Northern Lumber Co	Leavenworth, Wash	100
Puget Sound Mills & Shingle Co	South Bellingham, Wash	350
Siler Mill Co	Raymond, Wash	100
Clear Lake Lumber Co	Clearlake, Wash	300
*National Lumber & Mfg. Co	Hoquiam, Wash	200
Union Mill & Timber Co	Union Mills, Wash	150
Ferry-Baker Lumber Co	Everett, Wash	150
*L. B. Menefee Lumber Co	Rainier, Ore	100
*Kalama Lumber & Shingle Co	Kalama, Wash	100
Snow Lumber & Shingle Co	Littell, Wash	100
Labam Mills & Timber Co	Labam, Wash	50
McCormick Lumber Co	McCormick, Wash	150
Globe Lumber Co	Globe, Wash	75
Winton Lumber Co	St. Joe, Idaho	125
Case Shingle & Lumber Co	Raymond, Wash	75
Rucker Bros	Lake Stevens, Wash	100
Kleeb Lumber Co	South Bend, Wash	100
Jamestown-Oregon Lumber Co	Monroe, Ore	250
Brighton Mills Co	Brighton, Ore	150
Oregon Silver Spruce Co	Bay City, Ore	75
*Hammond Lumber Co	Astoria, Ore	300
White Pine Box & Lumber Co	La Grande, Ore	75
Minam Lumber Co	Minam, Ore	50
*J. B. Kelly Lumber Co	Warrenton, Ore	75
Peshastin Lumber & Box Co	Peshastin, Wash	50
Deschutes River Lumber Co	Tacoma, Wash	50
*Lindstrom-Handforth Lumber Co	Rainier, Wash	100
Siuslaw Mill Co	Tiernan, Ore	50
Wait Mill & Lumber Co	Granite Falls, Wash	100
Washington Fir Lumber Co	Winlock, Wash	50
Puget Sound Lumber & Box Co	Seattle, Wash	100
*Oregon Box & Mfg. Co	Portland, Ore	75
Neff Lumber Co	Aberdeen, Wash	60
W. H. Eccles Timber Co	Baker, Ore	75
Peninsula Lumber Co	Portland, Ore	250

* Burned since 1922.

2640 No. 13.

While a so-called "overproduction" of lumber has been reported during the past five years, the entire supply has moved into consumption at a price not altogether favorable.

No. 14.

Heavy production has caused a weakening in lumber prices during recent years—demand, however, has absorbed the cut, due in part to phenomenally large construction programs throughout the country. At present, values are firmer, and this in the face of less building throughout the consuming markets. Curtailment of output accounts for part of the present market strength.

No. 15.

Profits as a whole in Oregon, Washington, and Idaho have not been satisfactory to the mills as a whole during recent years. Well located plants with good timber and efficient management have shown a fair profit.

No. 16.

As a whole, the selling price and manufacturing costs have been exceedingly close. A margin of profit depends on the factors mentioned in question No. 15.

No. 17.

New mills may be erected from time to time. These will be required to salvage insect infested timber; overripe timber; or to liquidate timber investments. Rate of new construction will depend on future market conditions, increasing tax burden, etc. Present mills may be replaced with larger and more efficient plants.

2641 No. 18.

Yes; when built to safeguard owners' timber investments or to salvage timber in jeopardy from a variety of causes.

No. 19.

Some additional construction may be advisable in southwestern Oregon, the Olympic Peninsula of Washington, and parts of Idaho to develop timber reserves.

No. 20.

Southern pine production—1920–1926

[In M feet B. M.]

1920	11, 091, 000	1924	12, 486, 590
1921	10, 959, 863	1925	13, 235, 936
1922	11, 500, 771	1926	11, 751, 647
1923	12, 948, 687		

Figures for 1926 show southern pine production to be almost stationary since 1920. A falling off of approximately 10% is noted for 1926 compared with 1923. A relatively larger decrease should be apparent from 1927 and subsequently.

No. 21.

This decrease is smaller than generally anticipated.

No. 22.

Incorrect inventories of remaining timber and remarkable increase in the number of portable or semiportable mills, have been factors in prolonging the high production level of Southern pine.

No. 23.

A fairly large volume of lumber will continue to be produced in the South for many years. The number of large sawmills will decline fairly rapidly from now on.

2642 No. 24.

Southern pine producing States, showing 1926 lumber cut in M feet

Mississippi	2, 331, 545	North Carolina	706, 004
Louisiana	1, 868, 856	Florida	680, 867
Alabama	1, 820, 026	Virginia	381, 333
Texas	1, 231, 781	Oklahoma	134, 286
Georgia	982, 245	Other States	119, 695
Arkansas	780, 234		
South Carolina	714, 775	Total	11, 751, 647

Nos. 25 and 26.

Softwood lumber consumption of the United States—1920–1926 in M feet

1920	23, 253, 918	1924	26, 390, 999
1921	21, 185, 504	1925	29, 910, 478
1922	24, 789, 331	1926	28, 769, 344
1923	28, 259, 334		

No. 27.

Quantity and per cent distribution of lumber cut—1926 in M feet (hardwoods and softwoods)

Northeastern States	1, 409, 089	3. 8
Central States	1, 896, 766	5. 4
Southern States	13, 002, 788	35. 2
Carolinas	2, 658, 453	7. 0
Lake States	2, 046, 958	5. 5
North Pacific States	12, 000, 974	32. 5
California-Nevada	2, 187, 959	5. 9
Northern Rockies	1, 326, 169	3. 6
Southern Rockies	343, 491	0. 9
Other sections	63, 283	0. 2
Total	36, 935, 930	100. 0

No. 28.

Concrete and steel have competed with lumber for general building purposes since 1900 on a steadily keener basis. Figures showing percentages of displacement are to the best of knowledge unavailable.

Exhibit No. 54—Witness Lounsbury

I. C. C. docket No. 19680

Union Pacific system—Estimate of traffic showing commodity, point of origin, destination, through distance, Crane-Crescent Lake line distance, suggested rate, tonnage first year, percentage new traffic, and Crane-Crescent Lake line revenue

CRANE-CRESCENT LAKE LINE, OUTBOUND

Point of origin	Destination	Commodity	Through distance	Via junction	Distance to junction	Suggested through rate	Tonnage first year	Percentage new traffic	Gross revenue, Crane-Crescent Lake line
Milepost 133	Portland	Cattle	387 miles	Crescent Lake	168 miles	129.00 car	3,350 tons	None.	$13,065.00
" " "	San Francisco	Cattle	675 "	" "	168 "	48¢ 213.50 car	3,375 "	100	20,250.00
" " "	" "	Sheep	675 "	" "	168 "	79½¢ 222.00 car	287 "	100	1,722.00
" " "	" "	Hogs	675 "	" "	168 "	96½¢ 176.50 car	136 "	100	1,292.00
" " "	Chicago	Sheep	1,982 "	Crane	22 "	1.04			
" " "	Portland	Wool	387 "	Crescent Lake	168 "	1.13	575 "	None.	920.00
" " "	"	Mdse	387 "	" "	168 "	1.12	70 "	None.	714.00
Milepost 150	"	Cattle	370 "	" "	151 "	1.39½	60 "	100	78.00
" " "	Chicago	Sheep	1,999 "	Crane	39 "	129.00 car 48¢	550 "	None.	2,145.00
" " "	Portland	Wool	370 "	Crescent Lake	151 "	1.15	285 "	None.	570.00
" " "	"	Mdse	370 "	" "	151 "	1.10	35 "	None.	343.00
Milepost 180	"	Wheat	340 "	" "	121 "	1.36½	40 "	100	49.00
" " "	"	Cattle	340 "	" "	121 "	.29	150 "	100	309.00
" " "	Chicago	Sheep	2,029 "	Crane	69 "	129.00 car 48¢	110 "	None.	429.00
" " "	Portland	Wool	340 "	Crescent Lake	121 "	1.18	345 "	None.	897.00
" " "	"	Mdse	340 "	" "	121 "	1.05	42 "	None.	369.00
Milepost 230	"	Wheat	290 "	" "	71 "	1.31	20 "	100	22.00
" " "	"	Barley	290 "	" "	71 "	.27	2,250 "	100	3,037.00
" " "	"	Oats	290 "	" "	71 "	.27	400 "	100	540.00
" " "	San Francisco	Potatoes	578 "	" "	71 "	.27	320 "	100	432.00
" " "	Chicago	Apples	2,079 "	Crane	119 "	.58½	1,000 "	100	3,200.00
" " "	"	Pears	2,079 "	"	119 "	1.50	550 "	100	2,420.00
" " "	Portland	Cattle	290 "	Crescent Lake	71 "	1.73	200 "	100	1,430.00
" " "	Chicago	Sheep	2,079 "	Crane	119 "	129.00 car 48¢	650 "	None.	1,560.00
" " "	Portland	Wool	290 "	Crescent Lake	71 "	1.18	195 "	None.	507.00
" " "	Portland	Mdse	290 "	" "	71 "	.92	29 "	None.	179.00
						1.14	100 "	100	790.00

Union Pacific system—Estimate of traffic showing commodity, point of origin, destination, through distance, Crane-Crescent Lake line distance, suggested rate, tonnage first year, percentage new traffic, and Crane-Crescent Lake line revenue—Continued

CRANE-CRESCENT LAKE LINE, OUTBOUND

Point of origin	Destination	Commodity	Through distance	Via junction	Distance to junction	Suggested through rate	Tonnage first year	Percentage new traffic	Gross revenue, Crane-Crescent Lake line
Milepost 250	Portland	Cattle	270 miles	Crescent Lake	51 miles	128.50 car 47½¢	1,050 tons	None.	$3,090.00
" " "	Chicago "	Horses & mules	2,099 "	Crane	139 "	1.31½	275 "	None.	770.00
" " "	" "	Sheep	2,099 "	" "	139 "	1.18	495 "	None.	1,287.00
" " "	Portland	Wool	270 "	Crescent Lake	51 "	.87	64 "	None.	332.00
" " "	" "	Mdse	270 "	" "	51 "	1.07½	200 "	100	1,360.00
" " "	" "	Wheat	270 "	" "	51 "	.26	600 "	100	780.00
" " "	" "	Barley	270 "	" "	51 "	.26	240 "	100	312.00
" " "	" "	Oats	270 "	" "	51 "	.26	250 "	100	325.00
							18,878 "		65,525.00
							944 "		3,276.00
Miscellaneous 5%							19,822 "		68,801.00

CRANE-CRESCENT LAKE LINE, OUTBOUND

Point of origin	Destination	Commodity	Through distance	Via junction	Distance to junction	Suggested through rate	Second year		Third year		Fourth year		Fifth year	
							Tonnage	Revenue	Tonnage	Revenue	Tonnage	Revenue	Tonnage	Revenue
Milepost 133	Portland	Cattle	387 miles	Crescent Lake	168 miles	129.00 car .48	2,517	$13,718	3,603	$14,404	3,878	$15,124	4,072	$15,880
" "	San Francisco	Cattle	675 "	" "	168 "	213.50 car .79½	3,544	21,262	3,721	22,325	3,907	23,441	4,102	24,613
" "	" "	Sheep	675 "	" "	168 "	222.00 car .96½	301	1,805	316	1,899	332	1,994	349	2,094
" "	" "	Hogs	675 "	" "	168 "	175.50 car 1.04	150	1,421	158	1,492	166	1,567	174	1,645
" "	Chicago	Sheep	1,982 "	Crane	22 "	1.13	604	986	634	1,014	666	1,065	699	1,118
" "	Portland	Wool	387 "	Crescent Lake	168 "	1.12	75	785	79	803	83	843	87	885
" "	Portland	Merchandise	387 "	" "	168 "	1.39½	70	91	77	100	85	110	94	121
Milepost 150	Portland	Cattle	370 "	" "	151 "	129.00 car .48	577	2,252	606	2,365	636	2,483	668	2,607
" "	Chicago	Sheep	1,999 "	Crane	39 "	1.15	299	598	314	628	330	659	347	692
" "	Portland	Wool	370 "	Crescent Lake	151 "	1.10	40	392	42	412	44	433	46	455
" "	"	Merchandise	370 "	" "	39 "	1.36½	59	61	55	67	61	74	67	81
Milepost 180	"	Wheat	340 "	" "	121 "	.29	165	340	182	374	200	411	220	452
" "	"	Cattle	340 "	" "	121 "	129.00 car .48	121	472	127	496	133	521	140	547
" "	Chicago	Sheep	2,029 "	Crane	69 "	1.18	382	942	350	989	399	1,038	419	1,090
" "	Portland	Wool	340 "	Crescent Lake	121 "	1.05	46	405	48	425	51	447	54	469
" "	"	Merchandise	340 "	" "	121 "	1.31	40	44	44	48	48	53	53	58
Milepost 230	"	Wheat	290 "	" "	71 "	.27	2,700	3,644	2,970	4,008	3,267	4,408	3,594	4,850
" "	"	Barley	290 "	" "	71 "	.27	480	648	528	713	581	784	639	862
" "	"	Oats	290 "	" "	71 "	.27	384	518	422	570	464	627	510	690
" "	San Francisco	Potatoes	578 "	" "	71 "	.58½	1,100	3,520	1,210	3,872	1,333	4,269	1,464	4,685
" "	Chicago	Apples	2,079 "	Crane	119 "	1.50	550	2,420	550	2,420	550	2,420	550	2,420
" "	"	Pears	2,079 "	"	119 "	1.73	200	1,430	200	1,430	200	1,430	200	1,430
" "	Portland	Cattle	280 "	Crescent Lake	71 "	129.00 .48	682	1,638	716	1,720	752	1,806	790	1,898
" "	Chicago	Sheep	2,079 "	Crane	119 "	1.18	205	532	216	559	227	587	239	616
" "	Portland	Wool	280 "	Crescent Lake	71 "	.92	32	197	34	207	36	217	38	228
Milepost 250	"	Merchandise	280 "	" "	71 "	1.14	110	869	121	956	133	1,052	146	1,157
" "	Chicago	Cattle	270 "	" "	51 "	128.50 car .47½	1,081	3,244	1,135	3,406	1,192	3,576	1,252	3,755
" "	"	Horses and mules	2,099 "	Crane	139 "	1.31½	275	770	275	770	275	770	275	770
" "	"	Sheep	2,099 "	"	139 "	1.18	520	1,351	546	1,419	573	1,490	602	1,565
	Portland	Wool	270 "	Crescent Lake	51 "	.87	70	365	74	383	78	402	82	422

Union Pacific system—Estimate of traffic showing commodity, point of origin, destination, through distance, Crane-Crescent Lake line distance, suggested rate, tonnage, and Crane-Crescent Lake line revenues for second, third, fourth, and fifth years—Continued

Point of origin	Destination	Commodity	Through distance	Via junction	Distance to junction	Suggested through rate	Second year		Third year		Fourth year		Fifth year	
							Tonnage	Revenue	Tonnage	Revenue	Tonnage	Revenue	Tonnage	Revenue
Milepost 250	Portland	Merchandise	270 miles	Crescent Lake	51 miles	1.07½	220	$1,496	242	$1,646	266	$1,811	293	$1,992
" "	"	Wheat	270 "	" "	51 "	.26	720	836	797	920	877	1,012	967	1,113
" "	"	Barley	270 "	" "	51 "	.26	288	374	317	411	349	452	384	497
" "	"	Oats	270 "	" "	51 "	.26	300	390	330	429	363	472	399	519
Milepost 280	Chicago	Lumber	2,129 "	Crane	169 "	.70			12,650	36,685	12,650	36,685	12,650	36,685
" "	Omaha	"	1,636 "	"	169 "	.60½			3,795	11,005	3,795	11,005	3,795	11,005
" "	Denver	"	1,197 "	"	169 "	.44½			2,530	5,566	2,530	5,566	2,530	5,566
" "	California	"	528 "	Crescent Lake	21 "	.35½			5,060	7,084	5,060	7,084	5,060	7,084
" "	Local	"	100 "		100 "	.17			1,265	4,307	1,265	4,307	1,265	4,307
Total							19,878	69,799	46,459	138,327	47,169	142,486	49,315	146,921
Plus miscellaneous 5%							994	3,490	2,323	6,916	2,358	7,124	2,466	7,346
Grand total							20,872	73,289	48,782	145,243	49,527	149,610	51,781	154,267

2645 *Union Pacific system—Estimate of traffic showing commodity, point of origin, destination, through distance, Crane-Crescent Lake line distance, suggested rate, tonnage first year, percentage new traffic, and Crane-Crescent Lake line revenue*

CRANE-CRESCENT LAKE LINE, INBOUND

Pages 3, 4

Point of origin	Destination	Commodity	Through distance	Via junction	Distance to junction	Suggested through rate	Tonnage first year	Percentage new traffic	Gross revenue, Crane-Crescent Lake line
Portland	Milepost 133	Gasoline	387 miles	Crescent Lake	168 miles	0.80	180 tons	25	$1,422.00
Omaha	" " 133	Corn	1,494 "	Crane	22 "	.69	50 "	100	100.00
Chicago	" " 133	Emg't outfit	1,981 "	"	22 "	1.07	20 "	"	32.00
Boise	" " "	" "	190 "	"	22 "	.65½	20 "	"	32.00
Baker	" " "	" "	235 "	"	22 "	.73	20 "	"	32.00
Denver	" " "	" "	1,080 "	"	22 "	.82	20 "	"	32.00
Eugene	" " "	" "	263 "	Crescent Lake	168 "	.63½	20 "	"	146.00
Rock Springs	" " "	Coal	690 "	Crane	22 "	6.75 ton	100 "	"	50.00
Boise	" " "	Brick	190 "	"	22 "	.19½	120 "	"	84.00
Lime, Ore	" " "	Cement	193 "	"	22 "	.25½	130 "	"	130.00
Welser	" " "	Potatoes	166 "	"	22 "	.38	54 "	"	75.00
Detroit	" " "	Autos	2,252 "	"	22 "	4.77½	20 "	"	80.00
Chicago	" " "	Agric. impits	1,981 "	"	22 "	2.03	36 "	"	72.00
Portland	" " "	Shingles	387 "	Crescent Lake	168 "	.46½	72 "	"	360.00
Spokane	" " "	Posts	576 "	Crane	22 "	.51	100 "	"	90.00
Eugene	" " "	Fir lumber	263 "	Crescent Lake	168 "	.39	300 "	"	1,500.00
Chicago	" " "	Wire fence	1,981 "	Crane	22 "	1.47	45 "	"	110.00
Payette, Ida	" " "	Apples	152 "	"	22 "	.51	17 "	"	34.00
Portland	" " "	Sugar	387 "	Crescent Lake	168 "	1.00½	40 "	"	376.00
Salt Lake	" " "	Salt	606 "	Crane	22 "	.59	125 "	"	175.00
Caldwell	" " "	Flour	178 "	"	22 "	.38½	60 "	"	72.00
Portland	" " "	Canned goods	387 "	Crescent Lake	168 "	.59	25 "	"	127.00
"	" " "	Mdse	387 "	"	168 "	1.39½	200 "	"	2,600.00
Boise	" " "	"	190 "	Crane	22 "	.98½	200 "	"	560.00
Eugene	" " "	"	263 "	Crescent Lake	168 "	1.12½	100 "	"	1,300.00
Portland	Milepost 150	Gasoline	370 "	Crescent Lake	151 "	.80	90 "	50	612.00
Chicago	" " "	Emg't outfit	1,998 "	Crane	39 "	1.09	10 "	100	20.00
Denver	" " "	" "	1,096 "	"	39 "	.84	10 "	"	20.00
Eugene	" " "	" "	246 "	Crescent Lake	151 "	.64	10 "	"	71.00
Boise, Ida	" " "	" "	207 "	Crane	39 "	.57½	10 "	"	20.00
Portland	" " "	" "	370 "	Crescent Lake	151 "	.78	10 "	"	71.00
Rock Springs	" " "	Coal	707 "	Crane	39 "	7.00 ton	50 "	"	37.00
Salt Lake	" " "	Salt	623 "	"	39 "	.61	60 "	50	108.00
Chicago	" " "	Agric. impits	1,998 "	"	39 "	2.05	24 "	100	57.00
Portland	" " "	Shingles	370 "	Crescent Lake	151 "	.43	54 "	"	232.00
Spokane	" " "	Posts	603 "	Crane	39 "	.52	60 "	"	66.00
Portland	" " "	Fir lumber	370 "	Crescent Lake	151 "	.43	150 "	"	645.00
Chicago	" " "	Wire fence	1,998 "	Crane	39 "	1.49	30 "	"	84.00
Portland	" " "	Sugar	370 "	Crescent Lake	151 "	.98½	20 "	"	180.00

Union Pacific system—Estimate of traffic showing commodity, point of origin, destination, through distance, Crane-Crescent Lake line distance, suggested rate, tonnage first year, percentage new traffic, and Crane-Crescent Lake line revenue—Continued

CRANE-CRESCENT LAKE LINE, INBOUND—Continued

Point of origin	Destination	Commodity	Through distance	Via junction	Distance to junction	Suggested through rate	Tonnage first year	Percentage new traffic	Gross revenue, Crane-Crescent Lake line
Caldwell	Milepost 150	Flour	195 miles	Crane	39 miles	0.40	40 tons	100	60.00
Portland	" " "	Mdse	370 "	Crescent Lake	151 "	1.36½	150 "	"	1,860.00
Boise	" " "	"	207 "	Crane	39 "	1.00½	100 "	"	320.00
Eugene	" " "	"	246 "	Crescent Lake	151 "	1.09½	90 "	"	1,116.00
Lime, Ore	" " "	Cement	210 "	Crane	39 "	.26½	80 "	"	96.00
Boise, Ida	" " "	Brick	207 "	"	39 "	.20½	80 "	"	72.00
Chicago	Milepost 180	Emg't outfit	2,028 "	Crane	69 "	1.21½	10 "	100	45.00
Boise	" " "	"	237 "	"	69 "	.70	10 "	"	45.00
Salt Lake	" " "	Salt	653 "	"	69 "	.66	25 "	50	70.00
Chicago	" " "	Agric. implts	2,028 "	"	69 "	2.17½	12 "	100	80.00
Spokane	" " "	Posts	633 "	"	69 "	.56½	15 "	"	30.00
Portland	" " "	Fir lumber	340 "	Crescent Lake	121 "	.41½	100 "	"	400.00
Chicago	" " "	Wire fence	2,028 "	Crane	69 "	1.68	20 "	"	132.00
Portland	" " "	Mdse	340 "	Crescent Lake	121 "	1.31	80 "	"	904.00
2646 Portland	Milepost 230	Gasoline	290 miles	Crescent Lake	71 miles	.80	60 tons	50	240.00
"	" " "	Salt	290 "	"	71 "	.47	25 "	50	70.00
Detroit	" " "	Autos	2,349 "	Crane	119 "	4.97½	7 "	100	56.00
Chicago	" " "	Agric. implts	2,078 "	"	119 "	2.17½	24 "	"	117.00
Portland	" " "	Canned goods	290 "	Crescent Lake	71 "	.59	25 "	"	75.00
"	" " "	Flour	290 "	"	71 "	.27	40 "	"	84.00
"	" " "	Mdse	290 "	"	71 "	1.14	150 "	"	1,185.00
Eugene	" " "	"	166 "	"	71 "	.87	150 "	"	1,185.00
Portland	Milepost 250	Gasoline	270 "	Crescent Lake	51 "	.78	90 "	50	441.00
"	" " "	Salt	286 "	"	51 "	.44½	75 "	"	172.00
Detroit	" " "	Autos	2,369 "	Crane	139 "	4.99½	21 "	100	176.00
Chicago	" " "	Agric. implts	2,098 "	"	139 "	2.17½	24 "	"	117.00
"	" " "	Emg't outfit	2,098 "	"	139 "	1.33	20 "	"	136.00
Denver	" " "	"	1,197 "	"	139 "	1.08	20 "	"	136.00
Boise	" " "	"	307 "	"	139 "	.81½	20 "	"	136.00
Portland	" " "	"	270 "	Crescent Lake	51 "	.61	20 "	"	74.00
Eugene	" " "	"	146 "	"	51 "	.43½	20 "	"	74.00
Chicago	" " "	Machinery	2,098 "	Crane	139 "	1.78	100 "	"	320.00
Portland	" " "	Canned goods	270 "	Crescent Lake	51 "	.59	50 "	"	180.00
"	" " "	Flour	270 "	"	51 "	.26	60 "	"	78.00
"	" " "	Mdse	270 "	"	51 "	1.07½	300 "	"	1,980.00
Eugene	" " "	"	146 "	"	51 "	.80½	200 "	"	1,320.00

Portland	Milepost 280		Gasoline	240	"	Crescent Lake	21	"	.68	90	"	100	288.00
"	"	"	Emg't outfit	240	"	"	21	"	.55½	30	"	"	78.00
"	"	"	Canned goods	240	"	"	21	"	.68½	40	"	"	128.00
"	"	"	Flour	240	"	"	21	"	.24½	60	"	"	73.00
"	"	"	Mdse	240	"	"	21	"	.96	100	"	"	430.00
Eugene	"	"	Emg't outfit	116	"	"	21	"	.40	30	"	"	78.00
"	"	"	Mdse	116	"	"	21	"	.69	100	"	"	430.00
Chicago	"	"	Emg't outfit	2,128	"	Crane	169	"	1.47	20	"	"	192.00
"	"	"	Machinery	2,128	"	"	169	"	1.78	80	"	"	256.00
Boise	"	"	Brick	337	"	"	169	"	.30	80	"	"	240.00
Portland	"	"	Cement	240	"	Crescent Lake	21	"	.28½	100	"	"	170.00
Eugene	"	"	Lumber	116	"	"	21	"	.21	100	"	"	140.00
Total										5,905	"		27,818.00
Plus miscellaneous 5%										295	"		1,391.00
Grand total										6,200	"		29,209.00

Union Pacific system.—Estimate of traffic showing commodity, point of origin, destination, through distance, Crane-Crescent Lake line distance, suggested rate, tonnage, and Crane-Crescent Lake line revenues for second, third, fourth, and fifth years—Continued

CRANE-CRESCENT LAKE LINE, INBOUND

Point of origin	Destination	Commodity	Through distance	Via junction	Distance to junction	Suggested through rate	Second year		Third year		Fourth year		Fifth year	
							Tonnage	Revenue	Tonnage	Revenue	Tonnage	Revenue	Tonnage	Revenue
Portland	Milepost 133	Gasoline	387 miles	Crescent Lake	168 miles	0.80	200	$1,542	220	$1,698	240	$1,850	265	$2,043
Omaha	" " "	Corn	1,494 "	Crane	22 "	.69	60	120	70	140	80	160	100	200
Chicago	" " "	Emg't outfit	1,981 "	"	22 "	1.07	30	48	40	64	50	90	50	90
Boise	" " "	" "	190 "	"	22 "	.55½	30	48	40	64	50	90	50	90
Baker	" " "	" "	235 "	"	22 "	.73	30	48	40	64	50	90	50	90
Denver	" " "	" "	1,080 "	"	22 "	.82	30	48	40	64	50	90	50	90
Eugene	" " "	" "	263 "	Crescent Lake	168 "	.63½	30	216	40	288	50	360	50	360
Rock Springs	" " "	Coal	690 "	Crane	22 "	6.75 ton	120	60	140	70	160	80	180	90
Boise	" " "	Brick	190 "	"	22 "	.19½	140	98	160	112	180	126	200	140
Lime, Ore	" " "	Cement	193 "	"	22 "	.25½	140	140	150	150	160	160	170	170
Weiser	" " "	Potatoes	166 "	"	22 "	.38	60	84	70	98	80	112	90	126
Detroit	" " "	Autos	2,252 "	"	22 "	4.77½	30	120	35	140	40	160	50	200
Chicago	" " "	Agri. impits	1,981 "	"	22 "	2.03	50	100	60	120	70	140	80	160
Portland	" " "	Shingles	387 "	Crescent Lake	168 "	.46½	80	400	90	450	100	500	110	550
Spokane	" " "	Posts	576 "	Crane	22 "	.51	120	108	140	126	160	144	180	162
Eugene	" " "	Fir lumber	263 "	Crescent Lake	168 "	.39	320	1,600	350	1,750	370	1,850	400	2,000
Chicago	" " "	Wire fence	1,981 "	Crane	22 "	1.47	60	147	70	171	80	196	90	220
Payette, Ida	" " "	Apples	152 "	"	22 "	.51	30	90	45	90	45	90	60	120
Portland	" " "	Sugar	387 "	Crescent Lake	168 "	1.00½	50	470	60	564	70	658	80	752
Salt Lake	" " "	Salt	606 "	Crane	22 "	.59	130	182	135	189	140	196	145	203
Caldwell	" " "	Flour	178 "	"	22 "	.38½	70	84	80	96	90	108	100	120
Portland	" " "	Canned goods	387 "	Crescent Lake	168 "	.59	30	153	40	204	50	255	60	306
"	" " "	Mdse	387 "	" "	168 "	1.39½	220	2,860	240	3,120	260	3,380	280	3,640
Boise	" " "	"	190 "	Crane	22 "	.98½	220	616	240	672	260	728	280	784
Eugene	" " "	"	263 "	Crescent Lake	168 "	1.12½	110	1,340	120	1,560	130	1,690	140	1,820
Portland	Milepost 150	Gasoline	370 "	Crescent Lake	151 "	.80	100	680	110	748	120	816	130	884
Chicago	" " "	Emg't outfit	1,998 "	Crane	39 "	1.00	15	30	20	40	25	50	25	50
Denver	" " "	" "	1,096 "	"	39 "	.84	15	30	20	40	25	50	25	50
Eugene	" " "	" "	246 "	Crescent Lake	151 "	.64	15	106	20	142	25	177	25	177
Boise, Ida	" " "	" "	207 "	Crane	39 "	.57½	15	30	20	40	25	50	25	50
Portland	" " "	" "	370 "	Crescent Lake	151 "	.78	15	106	20	142	25	177	25	177
Rock Springs	" " "	Coal	707 "	Crane	39 "	7.00 ton	60	45	70	52	80	60	90	67
Salt Lake	" " "	Salt	623 "	"	39 "	.61	65	117	70	126	75	135	80	144
Chicago	" " "	Agri. impits	1,998 "	"	39 "	2.05	30	71	35	83	40	95	45	107
Portland	" " "	Shingles	370 "	Crescent Lake	151 "	.43	60	258	70	301	80	344	90	387
Spokane	" " "	Posts	603 "	Crane	39 "	.52	70	77	80	88	90	99	100	110
Portland	" " "	Fir lumber	370 "	Crescent Lake	151 "	.43	160	688	180	774	190	817	200	860
Chicago	" " "	Wire fence	1,998 "	Crane	39 "	1.49	40	112	50	140	60	168	70	196
Portland	" " "	Sugar	370 "	Crescent Lake	151 "	.98½	25	225	30	270	35	315	40	360
Caldwell	" " "	Flour	196 "	Crane	39 "	.40	40	60	50	75	60	90	7	105
Portland	" " "	Mdse	370 "	Crescent Lake	151 "	1.38¼	170	2,108	180	2,232	190	2,356	200	2,480

Boise	"	"	"	"	207	"	Crane	39	"	1.00½	110	352	120	384	130	416	140	448	
Eugene	"	"	"	"	246	"	Crescent Lake	151	"	1.09½	100	1,240	110	1,364	120	1,488	130	1,612	
Lime, Ore	"	"	"	Cement	210	"	Crane	39	"	.26½	90	108	100	120	110	132	120	144	
Boise	"	"	"	Brick	207	"	Crane	39	"	.20½	90	81	100	90	110	99	120	108	
Chicago	Milepost 180			Emg't outfit	2,028	"	Crane	69	"	1.21½	15	67	20	90	25	112	30	135	
Boise	"	"	"	"	237	"	"	69	"	.70	15	67	20	90	25	112	30	135	
Salt Lake	"	"	"	Salt	653	"	"	69	"	.66	30	84	35	98	40	112	50	140	
Chicago	"	"	"	Agri. implts	2,028	"	"	69	"	2.17½	15	73	20	98	25	122	30	147	
Spokane	"	"	"	Posts	633	"	"	69	"	.56½	20	40	25	50	30	60	35	70	
Portland	"	"	"	Fir lumber	340	"	Crescent Lake	121	"	.41½	110	440	120	480	130	520	140	560	
Chicago	"	"	"	Wire fence	2,028	"	Crane	69	"	1.68	25	165	30	198	35	231	40	264	
Portland	"	"	"	Mdse	3,340	"	Crescent Lake	121	"	1.31	90	1,017	100	1,130	110	1,243	120	1,356	
2648 Portland	Milepost 230			Gasoline	290 miles		Crescent Lake	71 miles		.80	70	280	80	320	90	360	100	400	
"	"	"	"	Salt	290	"	"	71	"	.47	30	84	35	98	40	112	45	126	
Detroit	"	"	"	Autos	2,349	"	Crane	119	"	4.97½	7	56	7	56	14	112	14	112	
Chicago	"	"	"	Agri. implts	2,078	"	"	119	"	2.17½	30	146	35	160	40	195	45	219	
Portland	"	"	"	Canned goods	290	"	Crescent Lake	71	"	.59	30	90	35	105	40	120	45	135	
"	"	"	"	Flour	290	"	"	71	"	.27	45	61	50	67	55	74	60	81	
"	"	"	"	Mdse	290	"	"	71	"	1.14	160	1,264	170	1,343	180	1,422	190	1,501	
Eugene	"	"	"	"	166	"	"	71	"	.87	160	1,264	170	1,343	180	1,422	190	1,501	
Portland	Milepost 250			Gasoline	270	"	Crescent Lake	51	"	.78	100	490	110	539	120	588	130	637	
"	"	"	"	Salt	286	"	"	51	"	.44½	80	184	85	195	90	207	95	218	
Detroit	"	"	"	Autos	2,369	"	Crane	139	"	4.99½	21	176	28	235	28	235	35	294	
Chicago	"	"	"	Agri. implts	2,098	"	"	139	"	2.17½	30	146	35	160	40	195	45	219	
"	"	"	"	Emg't outfit	2,098	"	"	139	"	1.33	30	204	40	272	50	340	60	408	
Denver	"	"	"	"	1,197	"	"	139	"	1.08	30	204	40	272	50	340	60	408	
Boise	"	"	"	"	307	"	"	139	"	.81½	30	204	40	272	50	340	60	408	
Portland	"	"	"	"	270	"	Crescent Lake	51	"	.61	30	111	40	148	50	185	60	222	
Eugene	"	"	"	"	146	"	"	51	"	.45½	30	111	40	148	50	185	60	222	
Chicago	"	"	"	Machinery	2,098	"	Crane	139	"	1.86	100	320	100	320	100	320	100	320	
Portland	"	"	"	Canned goods	270	"	Crescent Lake	51	"	.59	60	180	70	210	80	240	90	270	
"	"	"	"	Flour	270	"	"	51	"	.26	70	91	80	104	90	117	100	130	
"	"	"	"	Mdse	270	"	"	51	"	1.07½	320	2,112	350	2,310	380	2,508	400	2,640	
Eugene	"	"	"	"	146	"	"	51	"	.80½	220	1,452	240	1,584	260	1,716	280	1,848	
Portland	Milepost 280			Gasoline	240	"	Crescent Lake	21	"	.68	100	320	150	480	160	512	170	544	
"	"	"	"	Emg't outfit	240	"	"	21	"	.55½	40	104	60	156	80	208	80	208	
"	"	"	"	Canned goods	240	"	"	21	"	.68½	60	252	80	336	100	420	100	420	
"	"	"	"	Flour	240	"	"	21	"	.24½	80	97	100	122	120	146	120	146	
"	"	"	"	Mdse	240	"	"	21	"	.96	120	516	150	645	170	731	190	817	
Eugene	"	"	"	Emg't outfit	116	"	"	21	"	.40	140	104	50	130	60	156	70	182	
Eugene	"	"	"	Mdse	116	"	"	21	"	.69	120	516	150	645	170	731	190	817	
Chicago	"	"	"	Emg't outfit	2,128	"	Crane	169	"	1.47	30	288	40	384	50	480	60	576	
"	"	"	"	Machinery	2,128	"	"	169	"	1.78	400	1,280	100	320	100	320	100	320	
Boise	"	"	"	Brick	337	"	"	169	"	.30	200	600	80	240	80	240	80	240	
Portland	"	"	"	Cement	240	"	Crescent Lake	21	"	.28½	200	340	100	170	100	170	100	170	
Eugene	"	"	"	Lumber	116	"	"	21	"	.21	500	700	100	140	100	140	100	140	
Total											7,568	32,342	7,580	35,578	8,317	39,336	9,159	42,748	
Plus 5% miscellaneous											378	1,617	379	1,779	416	1,967	458	2,137	
Grand total											7,946	33,959	7,959	37,357	8,733	41,303	9,617	44,885	

2649 *Exhibit No. 55—Witness Lounsbury*

I. C. C. docket No. 19680

Livestock, per 36-foot cars

From—	To— Portland		San Francisco		
	Via Huntington	Via Crescent Lake	Via Portland	Via Wells	Via Crescent Lake
Ontario, Oregon:					
Cattle	$117.00	$180.50	$231.00	$206.50	$231.00
Sheep	117.00 DD	189.00 DD	244.00 DD	204.00 DD	244.50 DD
	93.50 SD	164.00 SD	197.50 SD		202.00 SD
Hogs	105.50 SD	162.00 SD	209.50 SD	181.00 SD	191.50 SD
	146.50 DD	233.50 DD		271.50 DD	
Horses	133.00	204.50	316.50	240.00	293.00
Vale, Oregon:					
Cattle	117.00	178.50	237.00	212.00	229.00
Sheep	117.00 DD	187.00 DD	244.00 DD	209.50 DD	242.50 DD
	93.50 SD	162.00 SD	197.50 SD		200.00 SD
Hogs	105.50 SD	159.50 SD	209.50 SD	186.00 SD	189.00 SD
	146.50 DD	230.50 DD		279.00 DD	
Horses	137.50	202.00	321.00	245.50	290.50
Harper, Oregon:					
Cattle	119.50	174.00	245.50	216.00	234.50
Sheep	119.50 DD	182.50 DD	258.50 DD	214.00 DD	238.00 DD
	95.50 SD	157.50 SD	199.50 SD		193.50 SD
Hogs	107.50 SD	159.50 SD	311.50 SD	189.50 SD	189.00 SD
	149.50 DD	230.50 DD		284.50 DD	
Horses	143.00	197.50	326.50	250.00	286.00
Crane, Oregon:					
Cattle	129.00	150.00	262.00	225.00	200.50
Sheep	129.00 DD	158.50 DD	281.00 DD	222.00 DD	214.00 DD
	103.00 SD	133.50 SD	207.00 SD		171.50 SD
Hogs	116.00 SD	142.00 SD	220.00 SD	197.00 SD	171.50 SD
	161.50 DD	204.50 DD		295.50 DD	
Horses	153.00	176.50	336.50	260.00	265.00
Burns, Oregon:					
Cattle	131.00	158.50	264.00	236.00	209.00
Sheep	131.00 DD	167.00 DD	292.00 DD	233.00 DD	222.50 DD
	105.00 SD	142.00 SD	209.00 SD		180.00 SD
Hogs	118.00 SD	180.50 SD	222.00 SD	208.00 SD	180.00 SD
	164.00 DD	217.00 DD		312.00 DD	
Horses	171.00	184.00	354.50	278.00	272.50
Portland, Oregon:					
Cattle			133.00		
Sheep			104.00 SD		
			146.50 DD		
Hogs			104.00 SD		
Horses			183.50		

Tariff authority: Rates to San Francisco via Wells U. P. R. R. tariff 6011-B, I. C. C. 3827.
Rates to Portland U. P. R. R. tariff 6013-A, I. C. C. 3640.
Rates to San Francisco via Portland U. P. R. R. 6013-A, I. C. C. 3640.
S. P. 681-D, I. C. C. 4569.
F. W. Gomph 1-J, I. C. C. 920.
Rates to San Francisco via Wells S. P. 681-D, I. C. C. 4569.
O. S. L. 2062-G, I. C. C. 2323.

2650 *Exhibit 56—Lounsbury*

Market prices—top prices on same day

[Taken from Oregonian market quotations]

	Cattle		Sheep		Hogs	
	Portland	San Francisco	Portland	San Francisco	Portland	San Francisco
1927						
Jan.	8.65	9.00	11.50	12.00	13.00	13.00
Feb.	9.00	9.00	12.00	12.00	12.85	12.50
Mar.	9.00	9.00	13.50	13.00	12.75	12.50
Apr.	10.00	9.50	15.00	15.50	11.75	12.50
May	10.15	9.00	13.00	13.50	10.50	11.25
June	9.25	8.50	12.50	13.25	10.50	10.85
July	9.25	8.75	12.50	13.25	10.50	11.25
Aug.	9.50	8.75	11.50	13.00	12.15	11.00
Sept.	9.65	9.60	11.50	13.00	12.75	12.40
Oct.	9.50	9.50	11.75	12.75	11.50	12.75
Nov.	9.75	9.50	11.75	12.75	10.25	10.50
Dec.	9.50	10.25	12.50	13.75	9.75	10.50
1928						
Jan.	11.75	13.00	12.50	14.25	10.00	10.25
Feb.	12.00	12.15	12.50	14.25	9.35	10.00
Mar.	12.60	12.75	12.75	15.50	8.75	9.75
Apr.	12.00	12.15	15.00	15.75	9.00	9.75
May	12.25	11.50	15.00	15.00	10.50	11.00
June	12.00	11.00	13.00	14.25	9.50	11.00

2651 *Exhibit 57—Lounsbury*

Statement showing number of carloads of livestock interchanged between the O.-W. R. & N. Co. and Southern Pacific Company at east Portland for the years 1928 and 1927

RECEIVED FROM S. P. COMPANY

Commodity	Switch	Local	O. S. L.	Marengo other than Transcontinental interchange Milwaukee	Wallula other than T. C. interchange with Northern Pacific	U. P.	East of Missouri River	Plummer other than T. C. interchange Milwaukee	Total
Year 1926:									
Cattle	259	85	5	5					354
Sheep	176	56	3	2	2	2			241
Hogs	79	1	1						81
Horses	16	14		1			1		32
Total	530	156	9	8	2	2	1		708
Year 1927:									
Cattle	644	140	1				1	1	787
Sheep	167	46	3				3		219
Hogs	92	3							95
Horses	33	18	1						52
Total	396	207	5				4	1	1,153

DELIVERED TO S. P. COMPANY

Commodity	Switch	Local	O. S. L.	West of Missouri River	U. P.	Marengo other than T. C.	East of Missouri River	Spokane other than T. C.	Spokane T. C.	Total
Year 1926:										
Cattle	293	54						22	2	371
Sheep	26	7	3							36
Hogs	33	3	2							38
Horses	13	33	3					1		50
Total	365	97	8					23	2	495
Year 1927:										
Cattle	213	53	1	1				30		298
Sheep	66	6	1		1		1			75
Hogs	29	2	3							34
Horses	11	25	3			1				40
Total	319	86	8	1	1	1	1	30		447

2652 *Exhibit 58—Lounsbury*

Wheat rates

From—	To— Salem		Eugene	
	Miles	Rate	Miles	Rate
The Dalles, Oregon	139	20	210	23
Wasco, "	168	21½	239	24½
Arlington, "	192	23	263	26
Condon, "	237	24½	308	27½
Willows, "	201	23	272	26½
Heppner, "	248	25	319	28
Messner, "	220	23½	291	27½
Pendleton, "	270	26	341	29½
Pilot Rock, "	281	27	352	30
La Grande, "	345	29½	415	32
Telocaset, "	367	30½	438	32½
Baker, "	396	32	467	33½

From—	To Portland				
	Via Huntington		Via Crescent Lake		Combination on Crescent Lake rate
	Mileage	Rate	Mileage	Rate	
Ontario, Ore.	432	[1] 31	535	[2] 34	48
Vale, "	447	[1] 35	519	[2] 33½	47½
Brogan, "	471	[1] 36	542	[2] 34½	48½
Riverside, "	525	[1] 38	442	[2] 33	43½
Crane, "	558	[1] 38	408	[2] 32	41½
Burns, "	588	[1] 43	433	[2] 32½	46½

Tariff authority: Tariff N. P. C. F. B. 42, P. S. C. Or. 109.

Tariff authority:
[1] Tariff O. S. L. R. R. 6003-B, I. C. C. 3405.
[2] Tariff N. P. C. F. B. 42, P. S. C. Or. 109.

2653 *Exhibit No. 59—Witness Lounsbury*

Rates on potatoes

From—	To San Francisco							To Los Angeles					
	Via Portland			Via Wells		Via Crescent Lake		Via Portland			Via Ogden		Via Crescent Lake (miles)
	Rail and water rate	All rail						Rail and water rate	All rail				
		Miles	Rate	Miles	Rate	Miles	Rate		Miles	Rate	Miles	Rate	
Boise, Idaho	74	1,214	85	978	62	877	89½	90	1,594	1.13	[1] 1,533 [2] 1,217	[1] 97½ [2] 62	1,256
Payette, "	66	1,149	80	1,004	63	822	85	85	1,528	1.04	[1] 1,559 [2] 1,243	[1] 98½ [2] 63	1,201
Ontario, Oregon	66	1,153	80	1,008	63	819	70½	85	1,532	1.04	[1] 1,556 [2] 1,240	[1] 98½ [2] 63	1,198
Yakima, Washington	36½	1,034	55					60½	1,414	76			
Redmond, Oregon	43½	956	58½					66½	1,335	81½			
Woodburn, "	26½	685	35½					51½	1,064	56½			
Eugene, "	42½	597	42					57½	976	56½			
Crescent Lake, Oregon	50½	502	42½					65½	881	56½			
Klamath Falls, Oregon	54	403	36					69	782	53			
Portland, Oregon	[3] 25½	721	35½					40½	1,100	56½			

[1] Via O. S. L. Ogden and S. P.
[2] Via Salt Lake and L. A. & S. L.
[3] All water.

Tariff authority: F. W. Gomph 1-J, I. C. C. 920.
N. P. C. F. B. 2-C, I. C. C. 215.
N. P. C. F. B. 11-C, I. C. C. 219.
U. P. R. R. 6032, I. C. C. 3472.
U. P. R. R. 6033-B, I. C. C. 3793.
S. P. 817-C, I. C. C. 4316.
McC. S. S. Co. 18-B, I. C. C. 13.
L. A. & S. L. 116-F, I. C. C. 503.

2654 *Exhibit 60—Lounsbury*

Carloads received by O.-W. R. & N. Co., from S. P. at east Portland, years, 1926 and 1927

	Switch	O.-W. local	O.S.L.	U. P.	East of Missouri River	West of Missouri River	Marengo T. C.	Marengo other than T. C.	Spokane T. C.	Spokane other than T. C.	Plummer other than T. C.	Total
Year 1926:												
Apples	15	6	1	.....	20	2	.....	.....	1	1	1	47
Pears	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Prunes	106	11	.....	30	48	2	10	3	1	.....	.....	211
Walnuts	.....	2	1	1	3	.....	.....	.....	.....	.....	.....	7
Canned goods	149	52	5	14	23	4	1	9	.....	1	3	261
Eggs	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Broccoli	.....	11	.....	337	293	1	10	.....	3	.....	.....	655
Cherries—express	.....	.....	.....	.....	43	.....	.....	.....	.....	.....	.....	43
Berries	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	2
Bulbs	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dried fruit	.....	5	.....	.....	.....	.....	.....	3	1	.....	1	10
Dressed poultry	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butter	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seeds	1	3	.....	.....	1	.....	5	.....	.....	.....	.....	10
Total	271	90	7	382	433	9	26	15	6	2	5	1,246
Year 1927:												
Apples	46	32	1	4	7	.....	.....	.....	.....	.....	.....	90
Pears	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Prunes	100	10	.....	16	76	3	9	.....	1	2	.....	217
Walnuts	1	4	1	1	2	.....	.....	1	.....	.....	.....	10
Canned goods	202	96	7	13	44	7	4	8	.....	2	4	387
Eggs	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Broccoli	.....	10	.....	54	168	.....	.....	.....	.....	1	.....	233
Cherries—express	.....	.....	.....	.....	69	.....	.....	.....	.....	.....	.....	69
Berries	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Bulbs	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dried fruit	1	6	.....	.....	2	.....	.....	6	.....	.....	1	16
Dressed poultry	.....	1	.....	.....	6	.....	.....	.....	.....	.....	.....	7
Butter	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seeds	4	6	.....	.....	.....	.....	13	1	.....	.....	.....	24
Total	356	166	9	88	374	10	26	16	1	5	5	1,096

2655 *Exhibit No. 61—Witness Lounsbury*

Statement showing the distribution of lumber by States of destination originating at all points on the Southern Pacific Oregon Lines moving via Portland, O.– W.R.&N. and connections for the year 1926

States	Via Huntington	Via Marengo	Via Spokane	
			S. I. Ry.	G. N. Ry.
Canada (east of Winnipeg)	6			
Colorado	242			
Connecticut	2			
District of Columbia	2			
Idaho	72			
Illinois	90	6	19	
Indiana	16			
Iowa	61	33		
Kansas	38			
Kentucky	5			
Louisiana	4			
Maine	1			
Massachusetts	2			
Michigan	50	23	12	3
Minnesota	28	300	151	4
Mississippi	3			
Missouri	41			
Montana	8	18		
Nebraska	107	1		
Nevada	8			
New Hampshire	3			
New Jersey	7			
New Mexico	135			
New York	13	5	1	
North Dakota		19	51	4
Ohio	20	5		
Pennsylvania	20	2	4	
South Dakota	12	206	14	1
Texas	825			
Utah	291			
Wisconsin	55	76	37	1
Wyoming	219			
Total	2,395	694	289	13

2656 *Exhibit No. 62—Witness Lounsbury*

Hay rates, carloads

To—	From— Hermiston, Oregon		Stanfield, Oregon		Echo, Oregon		Klamath Falls, Oregon		Ontario, Oregon		
									Via Crescent Lake		Combination on Crescent Lake, rate
	Rate	Miles	Rate	Miles	Rate	Miles	Rate	Miles	Rate	Miles	
Eugene, Oregon	28	314	28	315	28	318	20½	194	32	412	41½
Albany, "	26½	271	26½	272	26½	275	22½	238	33	455	44
Corvallis, "	26½	279	26½	280	27	283	22½	236	33	454	44
Salem, "	25	243	25	244	25	247	24	265	33½	483	45½
Hubbard, "	24	223	24	224	24	227	25	286	33½	503	46½
Woodburn, "	24	226	24	227	24	230	25	282	33½	500	46½
Independence, "	25½	258	25½	259	26	262	23½	256	33½	474	45
Dallas, "	25½	257	25½	258	25½	260	24	266	33½	484	45½
McMinnville, "	24½	233	24½	234	24½	236	25	282	33½	499	46½
Forest Grove, "	24	227	24	228	24½	231	26	309	34	523	47½
Tillamook, "	28	311	28	312	28	315	31	403	36	518	52½
Marshfield, "	32½	434	32½	435	32½	438	26½	318	34	533	48
Coquille, "	33	451	33	452	33	455	27½	333	34½	551	49

Tariff authority: S. P. 233-H, I. C. C. 4364.
N. P. C. F. B. 12-C, I. C. C. 232.

2657

From—	To— Hillsboro		Tillamook		Marshfield		Toledo		Eugene	
	Old	New	Old	New	Old	New	Old	New	Old	New
Boardman	28½	23	37	27	45	32	38	28	37	27
Umatilla	26½	23½	37	27½	45	32½	38	29	37	27½
Hermiston	27	23½	37½	28	45½	32½	38½	29	37½	28
Baker	34	31	44½	33½	52½	35½	45½	33½	44½	33½
Touchet	27	27	37½	37½	45½	45½	38½	38½	37½	37½
Yakima	29½	29½	40	40	48	48	41	41	40	40
La Grande	32½	28½	43	32	51	34	44	33	43	32

New rates effective January 21, 1924, on Oregon State traffic tariff authority:
Old rates combination on Portland N. P. C. F. B. 12-C, I. C. C. 232.
S. P. tariff 235-H, I. C. C. 4563.
New rates—two line distance rates N. P. C. F. B. 12-C, I. C. C. 232. (Except no change Yakima and Touchet.)

2658

To—	Via Crescent Lake							
	From— Ontario		Vale		Crane		Burns	
	Miles	Rate	Miles	Rate	Miles	Rate	Miles	Rate
Hillsboro A	528	48	523	47½	401	41½	431	46
B		34		34		32		36½
Tillamook A	618	52½	602	52	491	46	521	50½
B		36		36		33½		38
Marshfield A	534	48	518	47½	407	41½	437	46
B		34		33½		32		36½
Toledo A	516	47	500	46½	389	40½	419	45
B		33½		33½		31½		36
Eugene A	412	41½	396	41	285	35	315	39½
B		32		32		27		31½

A Combination on Crescent Lake.
B Continuous mileage.

Tariff authority:
N. P. C. F. B. 12-C, I. C. C. 232.
S. P. 233-H, I. C. C. 4364.

Exhibit No. 63—witness Lounsbury

Class rates, in cents per 100 lbs.

Miles	From—	To—		1	2	3	4	5	A	B	C	D	E	Tariff authority
432	Portland	Ontario	Present	169	143½	118½	101½	84½	84½	67½	51	42½	34	U. P. 6045-C I. C. C. 3753.
			October 1, 1928	166	141	116	100	83	83	66	50	42	33	
558	Portland	Crane	Present	254½	224	182½	156½	131	131	106	84½	67½	52	U. P. 6045-C I. C. C. 3753.
			October 1, 1928	217	184	152	130	109	109	87	65	54	43	
589	Portland	Burns	Present	274½	241	196½	168½	141	141	114	91½	72½	56	U. P. 6045-C I. C. C. 3753.
			October 1, 1928	237	201	166	142	119	119	95	72	59	47	O. S. L. 4303 I. C. C. 2514.
408	Portland, via Crescent Lake	Crane		205½	176½	144	124	103	103	82	62½	52	41½	
438	Portland, via Crescent Lake	Burns		225½	193½	158	136	113	113	90	69½	57	45½	
	San Francisco, via Portland, water and rail.	Ontario	Present	218½	186	151½	126½	103	103	86	69½	61	52½	U. P. 6045-C I. C. C. 3753.
			October 1, 1928	215½	183½	149	125	101½	101½	84½	68½	60½	51½	
1,152	San Francisco, via Portland, all rail	Ontario	Present	241	201½	176½	159½	124	124	107	90½	82	73½	S. P. 729-D I. C. C. 4303.
			October 1, 1928	238	199	174	158	122½	122½	105½	89½	81½	72½	U. P. 6045-C I. C. C. 3753.
819	San Francisco, via Lake Crescent	Ontario		313	264½	223½	191	159½	159½	127	96	80	64	S. P. 729-D I. C. C. 4303. N. P. C. F. B. 2-C I. C. C. 215.
1,000	San Francisco, via Wells	Ontario		332	286	246	209	169	169	136	113	96	80	F. W. Gomph 23-G I. C. C. 907.
	San Francisco, via Portland, water and rail.	Crane	Present	304	266½	215½	181½	149½	149½	124½	103	86	70½	U. P. 6045-C I. C. C. 3753.
			October 1, 1928	266½	226½	185	155	127½	127½	105½	83½	72½	61½	
1,278	San Francisco, via Portland, all rail	Crane	Present	326½	282	240½	214½	170½	170½	145½	124	107	91½	S. P. 729-D I. C. C. 4303.
			October 1, 1928	289	242	210	188	148½	126½	104½	104½	93½	82½	U. P. 6045-C I. C. C. 3753.
692	San Francisco, via Crescent Lake	Crane		277½	234½	198½	169½	141½	141½	113	84½	71	57	S. P. 729-D I. C. C. 4303. N. P. C. F. B. 2-C I. C. C. 215. F. W. Gomph 23-G I. C. C. 907. O. S. L. 2074-M I. C. C. 2531.
1,123	San Francisco, via Wells	Crane		383	329½	282	240	201½	201½	157	131	118½	101½	
	San Francisco, via Portland, water and rail.	Burns	Present	324	283½	229½	193½	159½	159½	132½	110	91	74½	U. P. Tariff 6045-C I. C. C. 3753.
			October 1, 1928	288½	243½	199	177	137½	137½	113½	90½	77½	65½	
1,309	San Francisco, via Portland, all rail	Burns	Present	346½	299	254½	226½	180½	180½	153½	131	112	95½	S. P. 729-D I. C. C. 4303.
			October 1, 1928	309	259	224	200	158½	136½	112½	111½	98½	86½	U. P. 6045-C I. C. C. 3753.
722	San Francisco via Crescent Lake	Burns		297½	251½	212½	181½	151½	151½	121	91½	76	61	S. P. 729-D I. C. C. 4303. N. P. C. F. B. 2-C I. C. C. 215. F. W. Gomph 23-G I. C. C. 907. O. S. L. 2074-M I. C. C. 2531 and 4303 I. C. C. 2514.
1,153	San Francisco, via Wells	Burns		403	346½	296	252	211½	211½	165	138	123½	105	

NOTE.—Rates shown above as effective October 1, 1928, are result of I. C. C. Docket 19459, State of Idaho ex rel Public Utilities Commission of Idaho vs. O. S. L. et al., decided July 5, 1928.

660 *Exhibit No. 64.—Witness Wipprecht*

Statement showing gross operating revenue, operating expenses, railway tax accruals, uncollectible railway revenues, equipment rents, and net railway operating income assignable to the Oregon Eastern Branch, extending from Ontario to Burns, Oregon, as taken into the accounts of the Oregon Short Line Railroad Co., during the calendar years 1925, 1926, and 1927

Sheet 1 of 5 sheets.

	Account	1925	1926	1927
	REVENUES			
(1)	101. Freight [1]	121,927.49	162,585.49	153,252.15
(2)	102. Passenger	29,893.86	29,615.53	27,400.15
(3)	106. Mail	8,877.09	9,796.37	12,267.02
(4)	107. Express	3,182.94	3,890.12	4,540.37
(5)	110. Switching	5.85	5.85	37.35
(6)	132. Hotel and restaurant			227.23
(7)	135. Storage, freight	287.19	331.35	272.85
(8)	137. Demurrage	740.00	776.00	188.00
(9)	138. Telegraph and telephone	2,081.24	2,514.07	2,925.37
(10)	143. Miscellaneous	29.89	15.52	46.09
(11)	Total operating revenues	167,025.55	209,530.30	201,156.58
	EXPENSES			
(12)	Maintenance of way and structures	170,819.94	158,817.51	167,993.48
(13)	Maintenance of equipment	57,875.91	58,854.77	51,603.80
(14)	Traffic	7,835.48	9,177.82	9,508.71
(15)	Transportation, rail line	89,216.60	91,784.70	88,271.60
(16)	General	17,250.37	20,338.12	21,874.85
(17)	Total operating expenses	342,998.30	338,972.93	339,252.44
(18)	Revenues over expenses	175,972.75 red	129,442.63 red	138,095.86 red
(19)	Total taxes	58,791.19	62,348.00	67,737.22
(20)	Railway operating income	234,763.94 red	191,790.63 red	205,833.08 red
(21)	Uncollectible railway revenues		22.31	12.46
(22)	Equipment rents, net	21,762.60 red	15,581.76 red	11,914.51 red
(23)	Net railway operating income	256,526.54 red	207,394.70 red	217,760.05 red

[1] Includes revenue on material for the construction of line beyond Burns, Oregon, by Fred Herrick, moving over that portion of the line from Ontario Junction to Burns 1925, $840.61; 1926, $39,775.70; and 1927, $9,727.44. Also revenue on material for the construction of line Crane to Burns on which Fred Herrick paid charges to Crane and O.-W. R. R. & N. Co. paid charges beyond Crane, 1925, $3,913.86, and 1926, $10.13.

2661 *Statement showing amounts assignable to the Oregon, Eastern branch extending from Ontario to Burns, Oregon, as credited to railway operating revenues in the accounts of the Oregon Short Line Railroad Company during the calendar years 1925, 1926, and 1927*

Sheet 2-5 of 5 sheets.

	Account	1925	1926	1927
	REVENUES			
(1)	101. Freight	101,927.49	162,585.49	153,252.15
(2)	102. Passenger	29,893.86	29,615.53	27,400.15
(3)	103. Excess baggage			
(4)	104. Sleeping car			
(5)	105. Parlor and chair car			
(6)	106. Mail	8,877.09	9,796.37	12,267.02
(7)	107. Express	3,182.94	3,890.12	4,540.37
(8)	108. Other passenger train			
(9)	109. Milk			
(10)	110. Switching	5.85	5.85	37.35
(11)	111. Special service train			
(12)	112. Other freight train			
(13)	131. Dining and buffet			
(14)	132. Hotel and restaurant			227.23
(15)	133. Station, train, and boat privileges			
(16)	134. Parcel room			
(17)	135. Storage, freight	287.19	331.35	272.85
(18)	136. Storage, baggage			
(19)	137. Demurrage	740.00	776.00	188.00
(20)	138. Telegraph and telephone	2,081.24	2,514.07	2,925.37

Statement showing amounts assignable to the Oregon Eastern branch extending from Ontario to Burns, Oregon, as credited to railway operating revenues in the accounts of the Oregon Short Line Railroad Company during the calendar years 1925, 1926, and 1927—Continued

	Account	1925	1926	1927
	REVENUES			
(21)	139. Grain elevator			
(22)	140. Stockyard			
(23)	141. Power			
(24)	142. Rents of buildings and other property			
(25)	143. Miscellaneous	29.89	15.52	46.09
(26)	151. Joint facility, credit			
(27)	152. Joint facility, debit			
(28)	Total operating revenues	167,025.55	209,530.30	201,156.58
				Sheets 3–5
2662	MAINTENANCE OF WAY AND STRUCTURES			
(1)	201. Superintendence	22,294.21	20,879.34	20,616.26
(2)	202. Roadway maintenance	10,194.23	8,811.49	12,633.09
(3)	206. Tunnels and subways	2,784.35	1,298.77	1,539.58
(4)	208. Bridges, trestles, and culverts	20,796.50	12,472.29	24,762.40
(5)	212. Ties	62,068.79	60,318.26	51,411.45
(6)	214. Rails	125.65	28.90	84.31
(7)	216. Other track material	838.23	721.04	1,029.17
(8)	218. Ballast			
(9)	220. Track laying and surfacing	34,152.90	37,993.25	39,794.50
(10)	221. Right-of-way fences	4,039.56	1,483.28	447.43
(11)	223. Snow and sand fences and snowsheds	16.44	8.60	11.35
(12)	225. Crossings and signs	331.87	205.77	395.95
(13)	227. Station and office buildings	2,210.53	3,764.35	3,787.13
(14)	229. Roadway buildings	758.52	683.46	1,072.04
(15)	231. Water stations	1,184.20	412.59	1,311.46
(16)	233. Fuel stations	83.36	66.90	301.54
(17)	235. Shops and enginehouses	70.12	77.94	106.65
(18)	241. Wharves and docks			
(19)	247. Telegraph and telephone lines	2,281.79	1,972.87	1,783.32
(20)	249. Signals and interlockers	22.86	119.73	.86
(21)	253. Power plant buildings			
(22)	257. Power transmission systems			
(23)	259. Power distribution systems			20.41
(24)	261. Power line poles and fixtures			23.00
(25)	265. Miscellaneous structures			
(26)	267. Paving			
(27)	269. Roadway machines	1,676.76	2,053.49	1,884.86
(28)	271. Small tools and supplies	3,393.32	3,933.08	3,568.81
(29)	272. Removing snow, ice, and sand	444.72	370.72	253.73
(30)	273. Assessments for public improvements			10.80
(31)	284. Injuries to persons	11.93	4.00	7.00
(32)	275. Insurance	443.97	443.97	443.97
(33)	276. Stationery and printing	568.05	595.80	585.26
(34)	277. Other expenses	25.08	97.62	139.13
(35)	278. Maintaining joint tracks, yards, and other facilities, dr.			
(36)	279. Maintaining joint tracks, yards and other facilities, cr.			
(37)	Total maintenance of way and structures	170,819.94	158,817.51	167,903.48
2663	MAINTENANCE OF EQUIPMENT			
(1)	301. Superintendence	3,961.88	4,210.47	4,038.45
(2)	302. Shop machinery	1,174.09	1,499.77	1,320.31
(3)	304. Power plant machinery	664.54	636.87	456.54
(4)	306. Power substation apparatus	67.41	4.80	15.12
(5)	308. Steam locomotives, repairs	28,233.92	29,322.02	24,339.70
(6)	309. Steam locomotives, depreciation	4,264.04	4,477.17	4,552.05
(7)	310. Steam locomotives, retirements	133.79	57.00	84.34
(8)	314. Freight-train cars, repairs	7,910.76	10,026.39	8,504.81
(9)	315. Freight-train cars, depreciation	1,951.67	2,565.05	2,296.29
(10)	316. Freight-train cars, retirements	12.47 red	8.19 red	9.34 red
(11)	317. Passenger-train cars, repairs	3,169.05	3,357.98	3,505.26
(12)	318. Passenger-train cars, depreciation	603.36	644.34	695.50
(13)	319. Passenger-train cars, retirements	275.36	138.72	
(14)	320. Motor equipment of cars, repairs	90.19	72.62	78.92
(15)	321. Motor equipment of cars, depreciation	7.19	7.84	33.75
(16)	322. Motor equipment of cars, retirements	17.35	1.58 red	
(17)	326. Work equipment, repairs	2,463.64	424.02	230.50
(18)	327. Work equipment, depreciation	1,598.37	124.22	67.51
(19)	328. Work equipment, retirements	2.03	1.84	3.22
(20)	329. Miscellaneous equipment, repairs	20.32	21.85	20.19
(21)	330. Miscellaneous equipment, depreciation	29.43	28.20	15.94

Statement showing amounts assignable to the Oregon, Eastern branch extending from Ontario to Burns, Oregon, as credited to railway operating revenues in the accounts of the Oregon Short Line Railroad Company during the calendar years 1925, 1926, and 1927—Continued

	Account	1925	1926	1927
	MAINTENANCE OF EQUIPMENT—Continued			
(22)	331. Miscellaneous equipment, retirements		1.38 red	
(23)	332. Injuries to persons	241.56	141.04	93.70
(24)	333. Insurance	731.83	773.79	769.41
(25)	334. Stationery and printing	196.00	222.29	164.66
(26)	335. Other expenses	80.60	107.63	126.97
(27)	Total maintenance of equipment	57,875.91	58,854.77	51,603.80
	TRAFFIC			
(28)	351. Superintendence	2,072.82	2,379.68	2,462.27
(29)	352. Outside agencies	3,318.92	3,988.10	4,206.11
(30)	353. Advertising	1,409.78	1,713.94	1,617.86
(31)	354. Traffic associations	155.55	187.31	189.24
(32)	356. Industrial and immigration bureaus	199.97	245.24	211.11
(33)	357. Insurance	3.08	3.91	4.07
(34)	358. Stationery and printing	657.82	638.64	799.91
(35)	359. Other expenses	17.54		18.14
(36)	Total traffic	7,835.48	9,177.82	9,808.71
2664	TRANSPORTATION, RAIL LINE			
(1)	371. Superintendence	3,710.48	4,255.39	4,203.74
(2)	372. Dispatching trains	1,914.37	2,043.46	1,859.07
(3)	373. Station employees	13,615.81	14,009.72	14,464.51
(4)	374. Weighing, inspection, and demurrage bureaus	316.15	442.98	379.97
(5)	376. Station supplies and expenses	721.08	766.32	960.50
(6)	392. Train enginemen	14,718.62	15,771.37	15,546.81
(7)	394. Fuel for train locomotives	21,462.88	20,394.29	17,204.63
(8)	397. Water for train locomotives	3,954.37	3,697.86	3,810.89
(9)	398. Lubricants for train locomotives	779.71	878.83	644.51
(10)	399. Other supplies for train locomotives	692.39	623.94	444.69
(11)	400. Enginehouse expenses, train	3,673.14	2,766.21	2,160.61
(12)	401. Trainmen	20,566.45	21,331.96	22,754.18
(13)	402. Train supplies and expenses	1,055.46	1,381.18	1,184.91
(14)	404. Signal and interlocker operation			
(15)	405. Crossing protection			
(16)	407. Telegraph and telephone operation	529.57	619.63	642.12
(17)	410. Stationery and printing	368.46	455.55	380.98
(18)	411. Other expenses		6.18	5.85
(19)	414. Insurance	232.70	263.54	273.60
(20)	415. Clearing wrecks	3.36	320.59	314.03
(21)	416. Damage to property		885.77	9.50
(22)	417. Damage to livestock on right-of-way	277.32	4.15	334.26
(23)	418. Loss and damage, freight	624.28	854.79	683.15
(24)	420. Injuries to persons		2.00	
(25)	Total transportation, rail line	89,216.60	91,784.71	88,271.60
	GENERAL			
(26)	451. Salaries and expenses of general officers	1,441.86	1,843.73	1,991.65
(27)	452. Salaries and expenses of clerks and attendants	9,635.40	11,011.00	11,245.23
(28)	453. General office supplies and expenses	748.76	878.42	1,028.35
(29)	454. Law expenses	1,400.49	1,534.38	1,650.79
(30)	456. Insurance	12.65	14.23	16.08
(31)	457. Pensions	665.46	817.85	905.89
(32)	458. Stationery and printing	442.43	524.50	475.54
(33)	459. Valuation expenses	832.78	919.64	1,158.43
(34)	460. Other expenses	2,070.54	2,794.35	3,309.90
(35)	Total general	17,250.37	20,338.12	21,874.85

Auditor's office, O. S. L. R. R. Co., Salt Lake City, Utah, May 31, 1928, file D-245-19.

Exhibit 65—Wipprecht

Union Pacific system—Oregon Short Line Railroad Company—Statement showing the cars and tons for carload traffic, segregated by commodities, and tons for less-than-carload traffic, forwarded from and received at stations on the Oregon Eastern and Brogan branches for the calendar years 1925 and 1926

Commodity	1925				1926			
	Forwarded		Received		Forwarded		Received	
	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons
Wheat	60	2,124			84	3,040		
Corn	3	71	14	423	2	40	15	456
Oats	3	71	10	267	2	41	5	140
Other grain	16	590	1	30	20	555	3	81
Flour			28	581			20	414
Other mill products			4	85	1	33	1	25
Apples	192	3,001			51	773	3	43
Other green fruit	10	129	1	13	28	371	1	16
Potatoes	83	1,263	12	187	50	767	9	143
Other fresh vegetables	16	244	4	50	21	326	3	34
Cattle and calves	508	7,341	19	247	593	7,644	32	413
Hogs	10	95			10	86		
Horses and mules	26	349			90	1,218	2	27
Sheep and goats	593	6,671	76	838	649	7,275	57	629
Wool	41	675			59	861		
Coal (bituminous)			95	4,250			78	3,666
Gravel			6	270				
Salt			14	297			20	413
Wood, fuel			17	571			21	844
Ties	1	15					99	4,684
Lumber	5	137	21	606	2	60	33	860
Other products of forests			12	216	1	22	10	179
Kerosene, gasoline & naphtha			79	1,847			77	1,969
Other petroleum oils			22	451	1	22	36	855
Brick			2	56				
Cement			18	515			28	746
Sewer pipe and drain tile			66	1,364	1	28	7	120
Pipe and pipe fittings			8	262			2	24
Automobiles & auto trucks	1	5	28	164			32	183
Other manufactures			19	300	2	26	12	185
Campers' & graders' outfits	3	31	9	147	15	191	7	141
Emigrant movables	5	54	8	87	2	20	1	10
Other miscl. commodities	8	154	35	836	13	298	49	1,350
Total all c/l commodities	1,644	23,020	628	14,960	1,697	23,697	663	18,650
Merchandise		1,058		2,776		896		2,678
Grand total	1,644	24,078	628	17,736	1,697	24,593	663	21,328

Auditor's office, Salt Lake City, Utah, August 27, 1927.

2666 *Exhibit 66—Wipprecht*

Union Pacific system—Oregon Short Line Railroad Company—Statement showing the number of cars and tons of commercial freight by commodities for carload traffic and number of tons for less-than-carload traffic, by destinations, on traffic originating at California points and delivered to the Oregon Short Line Railroad at Wells, Nevada, during the period February 15, 1926, to December 31, 1926, inclusive, and the year 1927

Commodity	Destination	Feb. 15 to Dec. 31, 1926		1927	
		Cars	Tons	Cars	Tons
Agricultural implements	Fairfield, Idaho			2	20
	Milner "			1	11
	Twin Falls "	2	37		
Automobiles and auto trucks	Burley "	3	15	26	156
	Declo "			1	6
	Rupert "			16	80
	Twin Falls "	2	12	52	267
Carbon bisulphite	Twin Falls "			6	120
Burlap bags	Buhl "			1	21
	Burley "			3	62
	Caldwell "			1	22
	McMillan "			2	54
	Rupert "			1	25
	Twin Falls "			18	402
Campers and graders outfits	Twin Falls "	1	13		
Chemicals and drugs	Boise "			1	20
	Pocatello "	1	8		
	Twin Falls "	6	127		
Copper wire	Boise "			1	25
Emigrant movables	Heyburn "			1	11
	Nampa "	1	10		
Empty bottles	Boise "			2	36
	Nampa "			1	21
Explosives	Minidoka "			6	90
Fertilizers, all kinds	Rupert "	1	15		
Fruit, dried and evaporated	Twin Falls "	1	51		
Kerosene, gasoline & naphtha	Boise "			5	132
	Twin Falls "	1	40		
Lumber	Nampa "	1	33		
	Wilder "	1	33		
Lubricating oil	Boise "			3	84
	Buhl "			8	319
	Burley "			1	17
	Contact, Nevada			1	25
	Emmett, Idaho			1	21
	New Plymouth "			1	40
	Payette "			10	383
	Twin Falls "			23	440
Machinery	Contact, Nevada	1	12		
	Buhl, Idaho			1	16
	Minidoka "	1	6		
	Mountain Home "	1	15	1	13
2667	Murphy, Idaho			1	30
	Twin Falls "	1	13		
Melons and cantaloupes	Twin Falls "	4	49	2	28
Nuts, edible	Twin Falls "	1	13		
	Boise "			1	17
Other fresh vegetables	Mutte, Mont.	3	37		
	Twin Falls, Idaho	6	69	2	26
Other fresh fruits	Twin Falls "	1	12	3	38
Other manufactures	Boise "	2	30	4	80
	Buhl "			4	172
	Burley "	2	40		
	Gooding "	1	20		
	Nampa "			1	20
	Twin Falls "	13	261	4	61
Other petroleum oils	Boise "	1	39		
	Burley "	1	17		
	Twin Falls "	7	123		
Potatoes	Twin Falls "	1	13	2	31
Pipe and pipe fittings	Buhl "			1	15
	Contact, Nevada	3	78		
Roofing	Boise Idaho			1	21
	Twin Falls "			5	120
Soap	Burley "	1	20	1	20
	Gooding "			1	20
	Twin Falls "	9	183	10	207
Sugar	Burley "	1	33	1	33
	Twin Falls "	12	355	11	342

Union Pacific System—Oregon Short Line Railroad Company—Statement showing the number of cars and tons of commercial freight by commodities for carload traffic and number of tons for less-than-carload traffic, by destinations, on traffic originating at California points and delivered to the Oregon Short Line Railroad at Wells, Nevada, during the period February 15, 1926, to December 31, 1926, inclusive, and the year 1927—Continued

Commodity	Destination	Feb. 15 to Dec. 31, 1926		1927	
		Cars	Tons	Cars	Tons
Sulphur	Twin Falls Idaho	1	21		
Wire and nails	Boise "	1	25		
Merchandise, all l. c. l. freight	Boise		11		11
	Buhl "		31		68
	Burley "		43		60
	Butte, Montana		1		
	Caldwell, Idaho		1		3
	Contact, Nevada		15		13
	Declo, Idaho		1		5
	Donnelly "				2
	Emmett "				4
	Fairfield "				1
	Filer "		8		19
	Gooding "		3		
	Hansen "		2		
	Hazelton "		1		2
	Hollister "				3
	Jerome "		2		5
	Ketchum "		2		
	Kimberly "		5		6
	King Hill "				1
	Meridian "		1		2
	Minidoka "		4		6
	Mountain Home "				1
2003	Murphy, Idaho				1
	Murtaugh "				1
	Nampa "		3		6
	New Plymouth				2
	Oakley "		1		3
	Parma "				2
	Paul "		1		1
	Payette "				2
	Red Point, Nevada				1
	Rogerson, Idaho		5		9
	Rupert "		11		31
	Shoshone "		1		2
	Twin Falls "		276		408
	Weiser [1] "		2		1
	Wendell "				1
Total		96	2,309	252	5,013

[1] Most remote westerly destination on O. S. L. R. R.

Auditor's Office, Salt Lake City, Utah, June 29, 1928.

2669 *Exhibit 67—Wipprecht*

Union Pacific system—Oregon Short Line Railroad Company—Statement showing the number of cars and tons of commercial freight by commodities for carload traffic and number of tons for less-than-carload traffic, originating on the Oregon Short Line Railroad exclusive of stations Armco, Idaho, to Wells, Nevada, and destined to points beyond Wells, Nevada, segregated as to traffic destined to California points and to all other points, with a further segregation of traffic destined to California points as to each point of origin west of Bliss, Idaho, and points of origin east thereof, during the period February 15, 1926, to December 31, 1926, inclusive, and the year 1927

DESTINED TO CALIFORNIA POINTS

Commodity	Origin	Feb. 15 to Dec. 31, 1926		1927	
		Cars	Tons	Cars	Tons
Apples	Weiser, Idaho	1	15		
	Buckingham "			1	15
Bones	Boise "			1	24
Cattle and calves	Murphy "	12	186		
Dairy products	Boise "			1	12
" "	Caldwell "	1	16	6	77
" "	Meridian "	11	184	9	108
" "	Weiser "	32	419	13	203
Dressed poultry	Caldwell "			1	13
" "	Meridian "			16	204
Live poultry	Meridian "			7	63
" "	Nampa "			1	9
" "	Payette "			1	9
Potatoes	Caldwell "			1	20
"	Montour "			1	15
"	Wilder "			3	45
Sheep	Cascade "			8	107
Merchandise, all l. c. l. freight	Boise "		1		2
	Fruitland "				1
	Kuna "				1
	Montour "				2
	Nyssa, Ore.		1		
	Payette, Idaho				1
	Weiser "				4
Apples	East of Bliss	3	45	12	134
Barley				6	228
Bran		37	1,110	59	1,767
Cattle and calves		35	455	15	177
Dairy products		26	366	15	205
Emigrant moveables		1	10	1	11
Empty carriers returned		2	22	1	8
Flour				6	135
Hogs		8	80	39	780
Honey				1	18
Machinery				3	48
2670 Other animal products		3	60	2	40
Other fresh vegetables		2	40	2	35
Peaches				1	12
Dressed poultry				12	168
Live poultry				5	45
Potatoes		35	694	192	3,797
Scrap cable				1	13
Sheep and goats		7	90	27	339
Wheat				42	1,194
Merchandise, all l. c. l. freight			71		112
Total		216	3,805	512	11,101

DESTINED OTHER THAN CALIFORNIA POINTS

Apples		3	45	3	45
Bran		1	30	2	60
Camper's & grader's outfit		1	12		
Cattle and calves		14	160	12	142
Potatoes		4	85	1	19
Prunes		1	19		
Sheep				5	87
Merchandise, all l. c. l. freight			28		30
Total		23	388	23	383

Auditor's office, Salt Lake City, Utah, June 20, 1928.

2671

Exhibit 68—Wipprecht

Union Pacific system—Oregon Short Line Railroad Company—Statement showing the number of cars and tons of commercial freight by commodities for carload traffic, and number of tons for less-than-carload traffic originating on the Oregon Short Line Railroad exclusive of Rogerson-Wells line and destined to points Rogerson, Idaho, to Wells, Nevada, inclusive, during the period February 15, 1926, to December 31, 1926, inclusive, and the year 1927

Commodity	Feb. 15 to Dec. 31, 1926		1927	
	Cars	Tons	Cars	Tons
Apples	1	15		
Brick			2	95
Castings and forgings, except machinery	1	10		
Cattle and calves	9	117		
Cement	1	20		
Corn			1	20
Culverts			1	13
Emigrant movables			2	22
Flour	1	20	1	21
Kerosene, gasoline, and naphtha	10	213	7	150
Hay			12	155
Horses			2	28
Lumber	5	131	1	26
Other petroleum oils	1	21		
Potatoes			1	20
Salt	2	30		
Scrap iron	2	67	2	51
Sheep	13	143	1	11
Merchandise, all l. c. l. freight		412		413
Total	46	1,219	33	1,027

Auditor's office, Salt Lake City, Utah, June 29, 1928.

2672 *Exhibit 69—Wipprecht*

Union Pacific system—Oregon Short Line Railroad Company—Statement showing the number of cars and tons of commercial freight by commodities for carload traffic and number of tons for less-than-carload traffic originating at points on the Oregon Short Line Railroad, Rogerson, Idaho, to Wells, Nevada, inclusive, segregated as to traffic destined to points on the Rogerson-Wells line, to points in California and to all other points, during the period February 15, 1926, to December 31, 1926, inclusive, and the year 1927

Commodity	Destined to Rogerson-Wells line				Destined to California [1]				Destined to all other points [1]			
	Feb. 15 to Dec. 31, 1926		1927		Feb. 15 to Dec. 31, 1926		1927		Feb. 15 to Dec. 31, 1926		1927	
	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons
Campers and graders outfits			1	10					1	17		
Cattle and calves					10	103	1	12	28	364	34	48
Cottonseed and products except oil	1	40										
Hay, straw, and alfalfa	1	11										
Horses and mules									2	24		
Household goods and secondhand furniture	1	10							1	10		
Ore									38	1,632	22	94
Other animal products	1	11			1	20						
Petroleum oils	1	16										
Potatoes									1	15		
Salt	2	40										
Sheep			5	55	27	309	9	104	72	810	42	47
Wool									3	50	4	6
Merchandise, all l.c.l. freight		74		106				3		13		3
Total	7	202	6	171	38	432	10	119	146	2,935	102	1,60

[1] Traffic from Rogerson, Idaho, excluded.

Auditor's office, Salt Lake City, Utah, June 29, 1928.

2673 *Exhibit No. 70—Witness Wipprecht*

Sheet 1 of 6 sheets.

Statement showing the mileage, and investment in road and equipment of the Oregon Short Line Railroad Company for that portion of the Wells branch extending between Rogerson, Idaho, and Wells, Nevada, for the years ending December 31, 1926 and 1927

	1926	1927
1. Miles of road	94.11	94.11
2. Investment in road and equipment	$3,404,049.16	$3,434,322.78

2674 *Statement showing the gross operating revenue, the operating expenses, railway tax accruals, the net railway operating income assignable to that portion of the Wells branch extending between Rogerson, Idaho, and Wells, Nevada, as taken into the accounts of the Oregon Short Line Railroad Company during the calendar years 1926 and 1927*

Sheet 2 of 6 sheets.

	Account	1926	1927
	REVENUES		
(1)	101. Freight	43,672.45	80,827.31
(2)	102. Passenger	10,412.94	10,129.85
(3)	103. Excess baggage	48.66	81.70
(4)	106. Mail	987.50	2,122.50
(5)	107. Express	1,462.57	1,531.60
(6)	108. Other passenger-train	14.97	12.82
(7)	109. Milk	.20	----------
(8)	132. Hotel and restaurant	5,519.99	----------
(9)	134. Parcel room	----------	.70
(10)	135. Storage, freight	11.51	15.11
(11)	136. Storage, baggage	13.08	10.86
(12)	137. Demurrage	30.00	100.00
(13)	138. Telegraph and telephone	159.11	99.64
(14)	143. Miscellaneous	61.61	24.38
(15)	Total operating revenues	62,394.59	94,956.47
	EXPENSES		
(16)	Maintenance of way and structures	39,054.65	56,501.98
(17)	Maintenance of equipment	13,664.51	13,652.71
(18)	Traffic	2,357.88	2,700.62
(19)	Transportation, rail line	28,485.26	30,257.74
(20)	General	5,225.11	6,215.09
(21)	Transportation for investment, credit	7,326.68	171.07
(22)	Total operating expenses	81,460.73	109,157.07
(23)	Revenues over expenses	19,066.14 red	14,200.60 red
(24)	Total taxes	27,294.92	26,615.54
(25)	Net railway operating income	46,361.06 red	40,816.14 red

2675 *Statement showing amounts assignable to that portion of the Wells branch extending between Rogerson, Idaho, and Wells, Nevada, as credited to railway operating revenues, in the accounts of the Oregon Short Line Railroad Company, during the calendar years 1926 and 1927*

Sheet 3 of 6 sheets.

	Account	1926	1927
	REVENUES		
(1)	101. Freight	43,672.45	80,827.31
(2)	102. Passenger	10,412.94	10,129.85
(3)	103. Excess baggage	48.66	81.70
(4)	104. Sleeping car	----------	----------
(5)	105. Parlor and chair car	----------	----------
(6)	106. Mail	987.50	2,122.50
(7)	107. Express	1,462.57	1,531.60
(8)	108. Other passenger-train	14.97	12.82
(9)	109. Milk	.20	----------
(10)	110. Switching	----------	----------
(11)	111. Special service train	----------	----------
(12)	112. Other freight-train	----------	----------
(13)	131. Dining and buffet	----------	----------
(14)	132. Hotel and restaurant	5,519.99	----------
(15)	133. Station, train, and boat privileges	----------	----------
(16)	134. Parcel room	----------	.70
(17)	135. Storage, freight	11.51	15.11
(18)	136. Storage, baggage	13.08	10.86
(19)	137. Demurrage	30.00	100.00
(20)	138. Telegraph and telephone	159.11	99.64
(21)	139. Grain elevator	----------	----------
(22)	140. Stockyard	----------	----------
(23)	141. Power	----------	----------
(24)	142. Rents of buildings and other property	----------	----------
(25)	143. Miscellaneous	61.61	24.38
(26)	151. Joint facility, credit	----------	----------
(27)	152. Joint facility, debit	----------	----------
(28)	Total operating revenues	62,394.59	94,956.47

2676 *Statement showing amounts assignable to that portion of the Wells branch extending from Rogerson, Idaho, to Wells, Nevada, as charged to railway operating expenses in the accounts of the Oregon Short Line Railroad Company during the calendar years 1926 and 1927*

Sheets 4-6 of 6 sheets.

	Account	1926	1927
	MAINTENANCE OF WAY AND STRUCTURES		
(1)	201. Superintendence	12,782.90	12,875.83
(2)	202. Roadway maintenance	2,170.49	5,209.36
(3)	206. Tunnels and subways		
(4)	208. Bridges, trestles, and culverts	1,007.13	690.79
(5)	212. Ties	608.07	794.13
(6)	214. Rails	73.07	23.85
(7)	216. Other track material	286.44	139.06
(8)	218. Ballast		
(9)	220. Track laying and surfacing	13,672.26	26,780.54
(10)	221. Right-of-way fences	183.24	142.85
(11)	223. Snow and sand fences and snowsheds	10.80	
(12)	225. Crossings and signs	59.54	170.75
(13)	227. Station and office buildings	369.31	893.62
(14)	229. Roadway buildings	482.49	579.32
(15)	231. Water stations	207.38	538.25
(16)	233. Fuel stations	15.00	
(17)	235. Shops and enginehouses	45.17	50.29
(18)	241. Wharves and docks		
(19)	247. Telegraph and telephone lines	888.22	910.51
(20)	249. Signals and interlockers	10.90	
(21)	253. Power plant buildings		
(22)	257. Power transmission systems		
(23)	259. Power distribution systems		
(24)	261. Power line poles and fixtures		
(25)	265. Miscellaneous structures		
(26)	267. Paving		
(27)	269. Roadway machines	1,060.86	795.94
(28)	271. Small tools and supplies	3,592.83	2,312.73
(29)	272. Removing snow, ice, and sand	188.76	1,337.26
(30)	273. Assessments for public improvements		
(31)	274. Injuries to persons	2.00	1.00
(32)	275. Insurance	655.71	716.94
(33)	276. Stationery and printing	364.44	356.27
(34)	277. Other expenses		
(35)	278. Maintaining joint tracks, yards, and other facilities, dr	317.64	1,473.70
(36)	279. Maintaining joint tracks, yards, and other facilities, cr		
(37)	Total maintenance of way and structures	39,054.65	56,501.98
2677	MAINTENANCE OF EQUIPMENT		
(1)	301. Superintendence	1,028.66	1,084.31
(2)	302. Shop machinery	366.41	408.20
(3)	304. Power plant machinery	155.59	122.58
(4)	306. Power substation apparatus	1.17	4.06
(5)	308. Steam locomotives, repairs	7,163.65	6,335.14
(6)	309. Steam locomotives, depreciation	1,093.82	1,222.21
(7)	310. Steam locomotives, retirements	13.92	22.64
(8)	314. Freight-train cars, repairs	1,816.38	2,016.08
(9)	315. Freight-train cars, depreciation	464.68	544.34
(10)	316. Freight-train cars, retirements	1.48 red	2.21 red
(11)	317. Passenger-train cars, repairs	923.34	1,057.08
(12)	318. Passenger-train cars, depreciation	177.17	209.74
(13)	319. Passenger-train cars, retirements	38.14	
(14)	320. Motor equipment of cars, repairs	19.97	23.80
(15)	321. Motor equipment of cars, depreciation	2.16	10.18
(16)	326. Work equipment, repairs	65.48	57.33
(17)	327. Work equipment, depreciation	19.18	16.79
(18)	328. Work equipment, retirements	.28	.80
(19)	329. Miscellaneous equipment, repairs	5.34	5.43
(20)	330. Miscellaneous equipment, depreciation	6.89	4.28
(21)	331. Miscellaneous equipment, retirements	.34 red	
(22)	332. Injuries to persons	34.46	25.16
(23)	333. Insurance	189.04	206.58
(24)	334. Stationery and printing	54.31	44.11
(25)	335. Other expenses	26.29	34.09
(26)	Total maintenance of equipment	13,664.51	13,652.71

Statement showing amounts assignable to that portion of the Wells branch extending from Rogerson, Idaho, to Wells, Nevada, as charged to railway operating expenses in the accounts of the Oregon Short Line Railroad Company during the calendar years 1926 and 1927—Continued

	Account	1926	1927
	TRAFFIC		
(27) 351.	Superintendence	611.37	699.58
(28) 352.	Outside agencies	1,024.59	1,195.04
(29) 353.	Advertising	440.33	459.67
(30) 354.	Traffic associations	48.12	53.77
(31) 356.	Industrial and immigration bureaus	63.26	59.98
(32) 357.	Insurance	1.00	1.16
(33) 358.	Stationery and printing	169.21	226.27
(34) 359.	Other expenses		5.15
(35)	Total traffic	2,357.88	2,700.62
2678	TRANSPORTATION, RAIL LINE		
(1) 371.	Superintendence	1,000.42	1,099.57
(2) 372.	Dispatching trains	496.75	501.32
(3) 373.	Station employees	3,637.06	5,495.46
(4) 374.	Weighing, inspection, and demurrage bureaus	80.25	90.07
(5) 376.	Station supplies and expenses	450.84	245.54
(6) 392.	Train enginemen	4,464.96	4,842.54
(7) 394.	Fuel for train locomotives	5,257.19	4,628.93
(8) 397.	Water for train locomotives	2,703.86	1,807.36
(9) 398.	Lubricants for train locomotives	226.54	173.41
(10) 399.	Other supplies for train locomotives	160.84	188.84
(11) 400.	Enginehouse expenses, train	1,234.58	1,494.11
(12) 401.	Trainmen	6,096.21	6,409.98
(13) 402.	Train supplies and expenses	245.05	277.54
(14) 404.	Signal and interlocker operation		
(15) 405.	Crossing protection		
(16) 407.	Telegraph and telephone operation	159.19	181.43
(17) 410.	Stationery and printing	294.23	273.11
(18) 414.	Insurance	67.71	77.76
(19) 415.	Clearing wrecks		37.14
(20) 416.	Damage to property		3.42
(21) 417.	Damage to livestock on right-of-way		10.25
(22) 418.	Loss and damage, freight	233.04	362.67
(23) 420.	Injuries to persons	3,000	147.25
(24) 412.	Operating joint tracks and facilities, dr	1,673.54	1,910.04
(25)	Total transportation, rail line	28,485.26	30,257.74
	GENERAL		
(26) 451.	Salaries and expenses of general officers	473.68	565.87
(27) 452.	Salaries and expenses of clerks and attendants	2,828.86	3,195.00
(28) 453.	General office supplies and expenses	225.68	292.18
(29) 454.	Law expenses	394.20	469.02
(30) 455.	Insurance	3.65	4.57
(31) 457.	Pensions	210.12	282.95
(32) 458.	Stationery and printing	134.75	135.96
(33) 459.	Valuation expenses	236.27	329.13
(34) 460.	Other expenses	717.90	940.41
(35)	Total general	5,225.11	6,215.09

Auditor's office, O. S. L. R. R. Co., Salt Lake City, Utah, July 3, 1928, file D-245-19.

2679 *Exhibit No. 71—Witness Wipprecht*

Statement showing investment in road and equipment, leased lines, material and supplies, gross earnings, expenses and taxes, net railway operating income, etc., of the Oregon Short Line Railroad Company for the calendar years ended December 31, 1924, 1925, 1926, and 1927

Item	Year ended December 31st			
	1924	1925	1926	1927
(1) Investment account 701	135, 414, 974. 17	138, 508, 583. 33	139, 936, 303. 61	142, 106, 475. 67
(2) Investment in leased lines	8, 954, 625. 87	9, 203, 822. 54	9, 219, 559. 58	9, 220, 786. 14
(3) Material and supplies	4, 609, 556. 53	3, 616, 981. 56	3, 640, 930. 68	3, 500, 916. 68
(4) Total investment	148, 979, 156. 57	151, 329, 387. 43	152, 796, 793. 87	154, 828, 178. 49
(5) Operating income, credits [1]	35, 268, 887. 75	35, 804, 972. 78	36, 720, 044. 22	36, 446, 455. 76
(6) Operating income, debits [2]	29, 742, 234. 33	29, 214, 014. 58	29, 695, 433. 25	29, 509, 541. 48
(7) Net railway operating income	5, 526, 653. 42	6, 590, 958. 20	7, 024, 610. 97	6, 936, 914. 28
(8) Per cent of investment	3. 71	4. 36	4. 60	4. 48
(9) Earnings which should have accrued under transportation act	8, 566, 301. 50	8, 701, 439. 78	8, 785, 815. 65	8, 902, 620. 26
(10) Per cent of investment	5. 75	5. 75	5. 75	5. 75
(11) Deficit	3, 039, 648. 08	2, 110, 481. 58	1, 761, 204. 68	1, 965, 705. 98
(12) Per cent	2. 04	1. 39	1. 15	1. 27

[1] Includes operating revenues, equipment, and joint facility rents, credit.
[2] Includes operating expenses, railway tax accruals, uncollectible railway revenues, equipment, and joint facility rents, debit.

Auditor's office, O. S. L. R. R. Co., Salt Lake City, Utah, July 3, 1928, file D-245-19.

Spokane, Portland and Seattle Railway Company—net railway operating income and return on investment—years, 1921 to 1927, inclusive

I. C. C. 17000—part 7, grain and grain products.

	1921	1922	1923	1924	1925	1926	1927	Total 7-year period	Average for 7-year period, 1921–1927, inclusive
Operating revenues:									
Freight	$5,440,049	$4,948,947	$6,140,494	$6,153,472	$5,938,129	$6,548,121	$6,955,767	$42,124,979	$6,017,854
Passenger	1,831,494	1,723,437	1,788,117	1,506,088	1,449,331	1,363,509	1,260,518	10,922,494	1,560,357
Mail	118,160	130,492	109,949	123,599	146,232	134,076	146,338	908,846	129,835
Express	208,285	214,954	275,531	275,585	170,378	167,925	129,568	1,442,226	206,032
All other transportation	165,258	177,807	202,388	221,251	225,668	229,799	242,333	1,465,004	209,286
Incidental	218,190	188,303	188,825	284,187	256,016	209,061	199,798	1,544,380	220,626
Joint facility, credit			118	94	250	388	341	1,191	170
Joint facility, debit	504	1,055	979	1,608	1,065	3,700	2,039	10,950	1,564
Total, railway operating revenues	7,980,932	7,382,885	8,704,943	8,562,668	8,184,939	8,649,179	8,932,624	58,368,170	8,342,596
Operating expenses:									
Maintenance of way and structures	907,173	711,021	1,121,065	1,058,055	1,037,488	1,242,636	1,173,439	7,250,877	1,035,840
Maintenance of equipment	1,050,984	1,112,819	1,465,939	1,247,061	1,197,110	1,134,758	1,185,739	8,394,410	1,199,201
Traffic	108,458	121,413	119,209	115,538	126,866	132,227	134,059	857,770	122,539
Transportation	2,701,908	2,415,083	2,512,853	2,514,062	2,547,333	2,424,075	2,520,808	17,636,122	2,519,446
Miscellaneous	110,610	104,528	125,007	96,944	101,075	72,654	63,050	673,863	96,267
General	260,033	245,264	212,746	256,347	252,522	266,291	271,631	1,764,834	252,119
Transportation for investment, credit	7,009	677	1,982	2,445	1,630	3,575	4,301	21,619	3,089
Railway operating expenses	5,132,157	4,709,451	5,554,837	5,285,562	5,260,764	5,269,066	5,344,425	36,556,262	5,222,323
Net revenue from railway operations	2,848,775	2,673,434	3,150,106	3,277,106	2,924,175	3,380,113	3,588,199	21,841,908	3,120,273
Railway tax accruals	1,014,036	894,410	900,365	828,145	939,023	979,139	984,594	6,539,712	934,245
Uncollectible railway revenues	8,441	1,241	627	3,184	1,572	426	434	15,925	2,275
Railway operating income	1,826,298	1,777,783	2,249,114	2,445,777	1,983,580	2,400,548	2,603,171	15,286,271	2,183,753
Equipment rents, net debit	256,934	266,793	470,592	511,551	325,826	276,117	264,710	2,372,523	338,932
Joint facility rents, net credit	111,694	143,210	103,649	106,309	115,293	157,175	115,627	852,957	121,851
Net railway operating income	1,681,058	1,654,200	1,882,171	2,040,535	1,773,047	2,281,606	2,454,088	13,766,705	1,966,672
Average number of miles of road operated	551.74	556.00	554.62	554.60	554.60	554.60	554.60		554.39

Spokane, Portland and Seattle Railway Company—net railway operating income and return on investment—years, 1921 to 1927, inclusive—Con.

	1921	1922	1923	1924	1925	1926	1927	Total 7-year period	Average for 7-year period, 1921–1927, inclusive
Investment at beginning of year:									
In property owned and used	[1] $61,682,269	$61,831,819	$61,892,387	$62,006,767	$63,372,667	$64,132,313	$64,356,901		$62,753,589
In leased property, exclusively used (the earnings from which are included in)	1,025,849	1,052,579	1,055,216	1,066,043	1,066,987	1,064,295	1,054,497		1,055,067
Net railway operating income in material and supplies (acct. 716)	1,179,490	763,915	451,615	585,078	727,235	789,655	680,000		739,569
Total	63,887,608	63,648,313	63,399,218	63,657,888	65,166,889	65,986,263	66,091,398		64,548,225
Rate of return as earned, per cent	2.63	2.60	2.97	3.21	2.72	3.46	3.71		3.05
Amount of return as contemplated under transportation act	3,833,256	3,685,237	3,645,455	3,660,329	3,747,096	3,794,210	3,800,255	$26,165,838	3,737,977
Per cent of return as contemplated under transportation act	6.00	[2] 5.79	5.75	5.75	5.75	5.75	5.75		5.79
Shortage in amount of return as earned	2,152,198	2,031,037	1,763,284	1,619,794	1,974,049	1,512,604	1,346,167	12,399,133	1,771,305
Shortage in percentage of return	3.37	3.19	2.78	2.54	3.03	2.29	2.04		2.74

[1] Investment in road and equipment.
[2] Based on 6% January and February, 1922, and 5.75% March to December, 1922.
Accounting Department, Portland, Oregon, July 23, 1928.

2681 *Oregon Trunk Railway—net railway operating income and return on investment, years 1921 to 1927, inclusive*

	1921	1922	1923	1924	1925	1926	1927	Total 7-year period	Average for 7-year period 1921–1927, incl.
Operating revenues:									
Freight	$346,112	$438,400	$538,414	$584,089	$592,308	$583,793	$542,511	$3,625,627	$517,947
Passenger	119,443	135,210	137,499	114,062	93,030	65,875	51,502	716,621	102,374
Mail	11,789	9,705	9,965	9,321	9,678	9,380	9,467	69,305	9,901
Express	20,387	17,676	21,301	19,871	15,984	17,646	11,522	124,387	17,770
All other transportation	7,900	1,230	1,220	996	925	714	656	6,531	933
Incidental	8,083	9,438	9,349	7,589	10,842	8,759	6,458	60,518	8,645
Joint facility, credit			4	44	24	78	41	191	27
Joint facility, debit	1,982	2,606	2,329	2,139	2,140	2,084	2,076	15,356	2,194
Total, railway operating revenues	504,622	609,053	715,428	733,883	720,651	684,161	620,081	4,567,924	655,403

Operating expenses:									
Maintenance of way and structures	177,994	113,487	205,563	207,001	230,509	234,136	222,892	1,391,672	198,810
Maintenance of equipment	33,084	49,528	59,405	49,850	56,911	53,833	49,048	351,659	50,237
Traffic	18,698	18,663	18,687	20,174	20,804	23,171	22,194	142,421	20,346
Transportation	211,469	214,317	243,537	257,327	287,453	260,012	258,738	1,732,853	247,550
Miscellaneous	929	592	279	798	5,084	2,278		9,960	1,423
General	62,413	58,220	58,107	60,916	61,229	60,678	63,134	424,697	60,671
Transportation for investment, cr	1,276	392	632	131	368	6,822	368	9,989	1,427
Railway operating expenses	503,311	454,445	584,946	595,935	661,712	627,286	615,638	4,043,273	577,610
Net revenue from railway operation	1,311	154,608	130,477	137,898	58,939	56,875	4,443	544,551	77,793
Railway tax accruals	79,323	85,555	90,803	95,051	81,628	91,228	92,666	616,254	86,036
Uncollectible railway revenue	43	14	166	33	279	4	9	548	78
Railway operating income	(78,055)	69,039	39,508	42,814	(22,968)	(34,357)	(88,232)	(72,251)	(10,321)
Equipment rents, net debit	95,954	113,458	144,995	161,615	170,839	166,723	156,630	1,010,714	144,316
Joint facility rents, net credit	98,271	101,419	93,801	84,172	80,473	70,437	80,863	609,436	87,062
Net railway operating income	(75,738)	57,000	(11,686)	(34,629)	(113,334)	(130,643)	(163,999)	(473,029)	(67,575)
Average number of miles of road operated	156.91	156.91	155.24	151.92	151.92	151.92	151.92		153.82
Investment at beginning of year:									
In property owned and used (the earnings from which are included in net railway operating income)	[1] 16,382,967	16,417,460	16,408,457	16,399,809	13,250,572	13,310,861	13,349,470		15,074,228
In material and supplies, acct. 716	93,308	26,595	26,837	10,289	34,289	62,787	36,836		41,563
Total	16,476,275	16,444,055	16,435,294	16,410,098	13,284,861	13,373,648	13,386,306		15,115,791
Rate of return as earned, per cent	(0.46)	0.35	(0.07)	(0.21)	(0.85)	(0.98)	(1.23)		(0.45)
Amount of return as contemplated under transportation act	988,577	952,111	945,029	943,581	763,880	768,985	769,713	6,131,876	875,982
Per cent of return as contemplated under transportation act	6.00	[2] 5.79	5.75	5.75	5.75	5.75	5.75		5.79
Shortage in amount of return as earned	1,064,315	895,111	956,715	978,210	877,214	899,628	933,712	6,604,905	943,557
Shortage in percentage of return	6.46	5.44	5.82	5.96	6.60	6.73	6.98		6.24

[1] Investment in road and equipment.
[2] Based on 6% January and February, 1922 and 5.75% March to December, 1922.
( ) Indicates red figures.

Accounting Department, Portland, Oregon, July 23, 1928.

	1921	1922	1923	1924	1925	1926	1927	Total 7-year period	Average for 7-year period, 1921–1927, inclusive
Operating revenues:									
Passenger	$810,831	$629,492	$551,195	$459,463	$408,354	$334,201	$279,538	$3,473,079	$496,154
Mail	2,429	2,666	2,576	2,400	1,650	2,141	2,131	15,993	2,285
Express	17,730	38,856	28,507	30,951	22,488	20,120	20,038	180,690	25,813
Freight	407,788	413,885	453,250	509,281	544,952	545,686	529,115	3,403,957	486,279
All other transportation	16,903	10,735	9,289	11,014	7,740	8,835	11,383	75,899	10,843
Other railway operations	37,825	43,651	44,879	43,145	42,806	43,998	41,157	297,461	42,494
Total railway operating revenue	1,293,506	1,139,285	1,089,696	1,056,259	1,027,990	956,981	883,362	7,447,079	1,063,868
Operating expenses:									
Maintenance of way and structures	267,716	239,546	232,259	297,601	226,556	233,536	226,613	1,723,827	246,261
Maintenance of equipment	183,413	159,851	155,427	147,709	162,547	155,900	160,147	1,124,994	160,714
Power	164,858	160,673	135,583	117,896	115,384	110,087	106,073	910,554	130,079
Conducting transportation	457,268	418,727	418,590	434,404	442,253	425,009	434,076	3,030,327	432,904
Traffic	20,644	20,970	19,437	21,131	22,078	23,736	24,149	152,145	21,735
General and miscellaneous	176,828	182,245	234,022	217,216	214,409	215,635	190,006	1,430,361	204,337
Transportation for investment, credit	2,903	934	1,942	2,831	1,859	2,965	724	14,158	2,023
Total railway operating expenses	1,267,824	1,181,078	1,193,376	1,233,126	1,181,368	1,160,938	1,140,340	8,358,050	1,194,007
Net revenue from railway operation	25,682	(41,793)	(103,680)	(176,867)	(153,378)	(203,957)	(256,978)	(910,971)	(130,139)
Taxes assignable to railway operations	110,860	97,045	80,612	55,753	70,736	67,866	69,078	551,950	78,850
Net railway operating income	(85,178)	(138,838)	(184,292)	(232,620)	(224,114)	(271,823)	(326,056)	(1,462,921)	(208,989)
Average number of miles of road operated	156.26	156.26	156.26	156.04	156.04	156.04	156.04		156.13
Investment at beginning of year:									
In property owned and used	[1] 13,233,757	13,220,783	13,291,239	13,290,485	13,263,781	13,248,539	13,207,365		13,250,850
In material and supplies (acct. 411)	194,556	103,063	74,554	82,099	56,413	82,060	80,215		96,138
Total	13,428,313	13,323,846	13,365,793	13,372,584	13,320,194	13,330,608	13,287,580		13,346,988
Rate of return as earned, per cent	(0.63)	(1.04)	(1.38)	(1.74)	(1.68)	(2.04)	(2.45)		(1.57)
Amount of return as contemplated under transportation act	805,699	771,451	768,533	768,924	765,911	766,510	764,036	5,411,064	773,009
Per cent of return as contemplated under transportation act	6.00	[2] 5.79	5.75	5.75	5.75	5.75	5.75		5.79
Shortage in amount of return as earned	890,877	910,289	952,825	1,001,544	990,025	1,038,333	1,090,092	6,873,985	981,998
Shortage in percentage of return	6.63	6.83	7.13	7.49	7.43	7.79	8.20		7.36

[1] Investment in road and equipment.
[2] Based on 6% January and February, 1922, and 5.75% March to December, 1922.
( ) Indicates red figures.

Accounting Department, Portland, Oreg., July 23, 1928.

2683 *Exhibit No. 75—Witness Godwin*

[Copy]

Statement showing number of tons, by commodities, of carload freight forwarded from all stations on the Oregon Short Line Railroad west of Mountain Home, Idaho, during the year 1923

Commodity	To destinations in—			
	California, north of Santa Barbara and Mojave	California, south of Santa Barbara and Mojave	Oregon	Washington
Agricultural implements			63	
Apples	70	1,151	16	
Automobiles	6		15	45
Barley			314	75
Bees and bee products		15	18	124
Box stuff shooks	28	449	449	
Brick			867	
Bran	60	240	251	
Butter	40	1,079	60	94
Campers & graders outfits	48		308	82
Cattle	403	1,140	12,524	8,140
Cement			30	
Cheese	39	229		280
Corn			30	15
Eggs	123	1,032	19	16
Emigrant movables	58	110	335	160
Empty carriers	13		40	
Explosives			10	
Flour		275	1,946	539
Fruit & vegetables, canned			99	
Hides, dry & green	32		738	
Hay & straw		12	42	
Hogs		9	1,899	3,240
Horses & mules		126	488	272
Ice			689	912
Junk	42			38
Lime & plaster			5,556	3,717
Lumber			2,151	
Machinery	18		65	12
Meats, dressed			145	
Milk, canned			443	22
Oats			138	58
Other products of animals			43	
Other grain			134	25
2684 Other green fruit			17	198
Other manufactures		36	131	81
Other mill products	21	30	66	20
Other products of agriculture			656	154
Ore & concentrates			852	20
Other products of mines			777	
Other vegetables			86	
Peaches		26	83	
Posts and stakes			11	
Potatoes	343	1,814	1,074	18
Poultry	99	44	24	207
Prunes	105	149		17
Scrap iron			126	51
Sewer pipe & D. tile			13	
Sheep	11	265	2,762	735
Shingles & lath			17	
Stone	8	143	1,139	
Telegraph poles & piles			17	
Wagons, trucks, etc			22	
Wheat		41	12,249	123
Wire and nails			15	
Wood, fuel			1,366	
Wool			843	33
Total	1,567	8,415	52,271	19,523

Union Pacific system—Oregon Short Line Railroad Company—Statement showing the number of tons, by commodities, of carload freight forwarded from all stations on the Oregon Short Line Railroad west of Mountain Home, Idaho, to destinations in California, north of Santa Barbara and Mojave, California, south of Santa Barbara and Mojave, Oregon and Washington, during the years 1924, 1925, and 1926

Commodity	1924				1925				1926			
	California, north of Santa Barbara and Mojave	California, south of Santa Barbara and Mojave	Oregon	Washington	California, north of Santa Barbara and Mojave	California, south of Santa Barbara and Mojave	Oregon	Washington	California, north of Santa Barbara and Mojave	California, south of Santa Barbara and Mojave	Oregon	Washington
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Wheat		515	1,472			295	467		146	266	27,934	574
Corn			243	20			258	15			287	63
Oats			357			51	156				507	21
Barley			4,260	688		121	1,466				538	
Other grain			60				80				603	507
Flour		294	1,750	686		203	1,544	902			2,040	1,099
Bran		440	553	60	150	350	433	40	813	875	554	21
Other mill products			30		170		158	74				
Hay, straw, and alfalfa			50				488				432	
Apples		1,037	19		64	3,452	122	39		3,063	173	
Grapes		12								37		
Peaches			200	28			161		14	14	303	
Prunes	13	37		85	28	13			41	172	16	
Other green fruit			71				52				114	
Potatoes	561	1,365	4,573	1,932	181	3,801	1,737	294	40	1,083	294	37
Melons and cantaloupes							40				20	
Other fresh vegetables		36	113	12		91	211	43	21	104	42	
Fruit-dried and evaporated								31				
Other products of agriculture			90	196			100	90			283	101
Horses and mules		56	52	167		84	656	62	14	195	1,659	121
Cattle and calves	342	1,758	17,432	3,969	862	1,662	12,978	4,610	296	1,313	12,202	6,175
Sheep and goats	160	12	4,387	212	273	108	2,597	228		35	3,574	583
Hogs		158	2,340	4,732	9	6	935	3,255		9	1,307	3,754
Fresh meats							24					
Poultry	323	200	22	361	375	268	29	214	493	410		110
Eggs	13	1,482	11	68	128	1,679		25	232	938	12	82
Butter	91	1,945	186	127	368	2,789	55	99	47	4,543		
Cheese	57	709	23	142		447		13		123		42
Wool			936				1,478				1,501	

Hides and leather	44		405				555	12			609	
Beer and bee products		83	50	94		40	119	143		30	21	149
Other animals and products	31		24		19		51	20	20		71	114
Ore			61	54			59					
Clay and earth							79				57	25
Gravel							150				550	
Sand							103					
Other stone		314	2,127		653	250	98		109	1,329	30	
Salt			30									
Logs			40				40					
Telegraph poles and piles			17				50					
Wood, fuel			1,595				2,744				2,627	
Box stuff, cooperage, shooks, etc	28	943	97	27	32	2,883	287	20	116	2,003	90	41
Lumber		422	1,069			465	1,257	24		253	1,478	20
2686 Other products of forests			63				27					
Kerosene, gasoline & naphtha											57	
Other petroleum oils			91	23			98		35		49	
Rails and fastenings			385				122	45				
Pipe and pipe fittings			13									
Structural iron and steel			47				10					
Castings and forgings, except machinery							18					36
Electrical machinery							16				12	
Other machinery	30		71		19	14		157			52	24
Cement			113									
Brick			479				634				376	
Cement blocks and artificial stone							656	1,057			43	574
Lime and plaster			5,209	4,939			1,428	1,250				120
Sewer pipe & drain tile											28	
Agricultural implements			23				41					12
Wagons, trucks, carriages, etc			14				22					
Automobiles & auto trucks			70	48	6		9		6			
Household goods and secondhand furniture	34	128	311	99	49	78	88	61	30	31	130	10
Willow & fiber ware											34	
Ice			104									
Fertilizers (all kinds)							85					
Chemicals and drugs			15								15	
Explosives							10				10	
Condensed milk, canned			438	538		227	462	805		714	573	886
Fruit & vegetables, canned			85	33	66		194	441			264	400
Empty cases and other carriers, returned	31		13			7	8		16		11	
Wire fencing											10	
Other manufactures			78	40	13	25	97	78	44		194	
Campers' and graders' outfits			406	110	31		541	139	112	20	374	140
Junk							18	41				56
Scrap iron				35								138
Other miscel. commodities			20	7				55			89	12
Total	1,758	11,946	53,141	20,156	3,496	18,818	36,392	14,282	2,684	17,560	62,519	16,017

Auditor's office, Salt Lake City, Utah, August 27, 1927.

2687

Exhibit 77—Godwin

Summary of attached statement showing the number of cars and percentages from O. S. L. points in Idaho to territorial destinations specified during the calendar year 1927

Commodity	Intermountain territory (Idaho, Montana, Utah, Wyoming)		Arizona		Nevada		California				Pacific Northwest (Oregon-Washington)		Colorado and east	
							Central and Northern		Southern					
	No. cars	per cent	No. cars	per cent	No. cars	per cent	No. cars	per cent	No. cars	per cent	No. cars	per cent	No. cars	per cent
Potatoes	1,340	7.56	146	.082	30	.017	661	3.73	2,232	12.58	10	.005	13,320	75.09
Wheat	5,792	60.25	0	.....	0	.....	753	7.83	436	4.54	665	6.92	1,966	20.46
Flour	595	33.48	0	.....	31	1.75	57	3.20	122	6.87	224	12.61	748	42.09
Apples	228	3.41	2	.03	3	.05	17	.25	306	4.57	28	.42	6,103	91.27
Beans	537	29.60	0	.....	0	.....	10	.55	2	.11	11	.61	1,254	69.13
Butter	7	1.19	0	.....	0	.....	71	12.09	470	80.07	21	3.58	18	3.07
Eggs	25	11.74	0	.....	0	.....	16	7.51	36	16.90	7	3.29	129	60.56
Cheese	81	18.88	0	.....	0	.....	95	22.14	147	34.27	70	16.32	36	8.39
Livestock	4,697	32.21	3	.02	31	.21	555	3.81	1,545	10.60	2,098	14.39	5,652	38.76

2688 *Union Pacific system—Oregon Short Line Railroad Company—Statement showing the number of carloads of potatoes, wheat, flour, apples, beans, butter, eggs, cheese, and livestock shipped from stations on the Oregon Short Line Railroad in Idaho to each destination State, with traffic to California segregated as to southern California and other California points and by movements via Ogden, Salt Lake City, Wells, or Portland, during the year 1927*

State	Potatoes	Wheat	Flour	Apples	Beans	Butter	Eggs	Cheese	Livestock
	Cars	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*	*Cars*
Alabama	98	1	41	40	7				
Arizona	146			2					3
Arkansas	92	9	61	37	16				
California-central and northern:									
Via Wells	196	40	7	12		24	13	2	87
" Ogden	319	703	31	4	1	30	3	37	356
" Salt Lake	146	10	19	1		17		36	110
" Portland					9				2
California, southern:									
Via Wells				1					
" Ogden	1		2						1
" Salt Lake	2,231	436	120	306	2	470	36	147	1,544
Canada				7					
Colorado	242	1,092	41	128	411		7	16	603
Connecticut	1			8			1		
Delaware									
Dist. of Columbia	26			6					
Florida	203			13	6				
Georgia	317	1	343	30	9				4
Idaho	978	1,719	436	198	513	7	4	79	3,090
Illinois	3,881	117	10	1,251	95		10	4	1,213
Indiana	123	43		200	33				2
Iowa	326	8		427	2				80
Kansas	554	53	1	210	69				32
Kentucky	26	3		68	80				2
Louisiana	122		108	29	47				
Maine							2		
Maryland	1			1	6				3
Massachusetts	13			12		1	4		
2869 Michigan	79		1	338	15		54		2
Minnesota	4	7		233	9	4			
Mississippi	50		53	92					
Missouri	1,768	586	9	798	135			2	987
Montana	53		22	10			19		157
Nebraska	387	2		297	29	1	11		2,683
Nevada	30		31	3					31
New Hampshire	10								
New Jersey	4		1	12			8		4
New Mexico	17								
New York	113			162	11		17		7
North Carolina	10				13				
North Dakota	1			4					4
Ohio	523			307	7	10	5		
Oklahoma	1,233	14		327	51				
Oregon	9	654	168	9	2	2		28	1,134
Pennsylvania	82			94	11	2	7		6
Rhode Island	3			5			2		
South Carolina	26								
South Dakota	21			128					13
Tennessee	77	19	77	118	120				
Texas	2,730	11	2	258	28			5	4
Utah	221	4,070	94	1	24		2	11	1,377
Vermont									
Virginia	2			2	15				2
Washington	1	11	86	19	9	19	7	42	904
West Virginia	18			16	19		1		1
Wisconsin	137			444	10				
Wyoming	88	3	43	19					73
Total	17,739	9,612	1,777	6,687	1,814	587	213	429	14,581

Auditor's office, Salt Lake City, Utah, April 2nd, 1928.

2690 *Exhibit 78.—Godwin*

Union Pacific system—Oregon Short Line Railroad Company—Statement showing the number of tons, by commodities, of carload freight forwarded from the Brogan and Oregon Eastern branch lines to destinations in California, north of Santa Barbara and Mojave, California, south of Santa Barbara and Mojave, Oregon, and Washington, during the years 1924, 1925, and 1926

Commodity	1924				1925			
	California, north of Santa Barbara and Mojave	California, south of Santa Barbara and Mojave	Oregon	Washington	California, north of Santa Barbara and Mojave	California, south of Santa Barbara and Mojave	Oregon	Washington
	Tons	*Tons*	*Tons*	*Tons*	*Tons*	*Tons*	*Tons*	*Tons*
Wheat			350				30	
Corn			103				71	
Oats			24				20	
Barley			625	118		36	448	
Other grain			60					
Apples		189				51	30	
Peaches				14				
Potatoes			399	306			129	
Other fresh vegetables							44	
Horses and mules			68				37	
Cattle and calves	130	1,014	6,183	1,194	660	414	2,714	975
Sheep and goats			2,599	55			1,185	34
Hogs			181	83			55	13
Poultry		23						
Wool			287				499	
Bees and bee products		16	10				6	16
Clay and earth							79	
Lumber			23				79	
Household goods and secondhand furniture			20	11			24	
Campers' and graders' outfits			23	77				
Total	130	1,242	10,955	1,858	660	501	5,450	1,038

Commodity	1926			
	California, north of Santa Barbara and Mojave	California, south of Santa Barbara and Mojave	Oregon	Washington
	Tons	*Tons*	*Tons*	*Tons*
Wheat			2,464	
Corn			40	
Oats			41	
Barley			130	
Other grain			74	
Apples		62	28	
Peaches			14	
Potatoes			15	
Other fresh vegetables				
Horses and mules			851	
Cattle and calves		78	3,656	1,845
Sheep and goats		23	1,927	46
Hogs			86	
Poultry				
Wool			623	
Bees and bee products				
Clay and earth			57	23
Lumber				
Household goods and secondhand furniture			10	
Campers' and graders' outfits			94	32
Total		163	10,110	1,948

Auditor's Office, Salt Lake City, Utah, August 27, 1927.

2691

Exhibit 79.—Godwin

[Copy]

Statement showing number of tons, by commodities, of carload freight, forwarded from the Brogan and Oregon Eastern branch lines, during the year 1923

Commodity	To destinations in—			
	California, north of Santa Barbara and Mojave	California, south of Santa Barbara and Mojave	Oregon	Washington
Barley			30	
Campers & graders outfit			26	
Cattle	12	624	2,129	1,225
Emigrant movables			20	10
Hogs		9	170	52
Horses and mules			553	
Lumber			96	
Peaches			42	
Potatoes			17	
Sheep		92	951	43
Wheat			249	
Wool			249	
Total	12	725	4,032	1,330

2692

Exhibit 80.—Godwin

Oregon Short Line Railroad Company—Statement showing the number of cars and tons of carload shipments of products of agriculture, livestock, and wool forwarded from each station, Crane, Oregon to Burns, Oregon, inclusive, during the years 1923 to 1927, inclusive

Commodity	1923				1924				1925			
	Crane		Burns		Crane		Burns		Crane		Burns	
	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons
Corn									1	30		
Wheat											9	316
Apples												
Hay												
Horses	8	111			10	139			5	67	13	175
Cattle	231	3,005			739	9,326			62	806	150	1,950
Sheep	167	1,843			207	2,251			123	1,377	66	745
Hogs	10	87			4	43			1	13		
Wool	24	381			24	378			13	211	5	83
Total	440	5,427			984	12,137			205	2,504	243	3,269

2693

Commodity	1926				1927			
	Crane		Burns		Crane		Burns	
	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons
Corn								
Wheat			8	281	1	20	38	1,614
Apples			1	12				
Hay					1	14		
Horses	22	305	15	207	7	98	11	141
Cattle	187	2,416	205	2,665	91	1,183	246	3,184
Sheep	107	1,205	106	1,186	53	586	127	1,429
Hogs	1	8			1	13	1	9
Wool	18	266	5	88	15	231	7	126
Total	335	4,200	340	4,439	169	2,145	430	6,503

Auditor's Office, Salt Lake City, Utah, July 31, 1928.

2694 *Exhibit No. 81—Witness Stacey*

Estimated cost of construction of proposed line of railroad in central Oregon from a point five miles west of Crane to Crescent Lake

Distance	Total cost	Cost per mile of main track
185 miles	$11,294,645	$61,022

2695 *Estimate of cost of railroad from junction point near Crane to Crescent Lake, Oregon, 185 miles, 19 M. sidings*

Acct. No.		SALT LAKE CITY, *June, 1928.*	
1.	Engineering	$507,400	$507,400
2.	Right of way:		
	Sagebrush and timber land 2,595 ac. at 10	25,950	
	Meadow land 320 " " 50	16,000	41,950
3a.	*Grading* (surveyed line, 5 mi. west of Crane to Odell, 172 mi.):		
	Clearing, Sage 1,320 ac. at 10.00	13,200	
	" Timber 845 " " 50.00	42,250	
	Borrow, common 4,346,800 C. Y. at .35	1,521,380	
	Excavation, " 1,016,300 " " .35	355,705	
	" Medium 120,200 " " .70	84,140	
	Excavation, Solid Rock 550,090 " " 2.00	1,100,180	
	Overhaul, 1 station 9,683,000 " " .02	193,660	
	Contingencies, 10%	331,000	
	Freight and fares	291,485	
3b.	*Grading* (unsurveyed line, Odell to Crescent Lake, 13 mi.): 13 mi. at $22,866 (av. of 172 mi.)	297,300	4,230,300
6.	*Bridges, trestles & culverts:*		
	Pile trestles 4,100 lin. ft. at 25.00	102,500	
	Concrete pipe 18" 1,800 " " " 4.50	8,100	
	" " 24" 5,600 " " " 5.00	28,000	
	" " 36" 2,400 " " " 8.00	19,200	
	Arch culverts 2,971 yds. " 30.00	89,130	
	Hauling material	115,440	
	Contingencies	30,030	392,400
8.	*Ties:*		
	Cross ties, treated 582,000 at 1.75	1,018,500	
	Switch ties 410 M. 40.00	16,400	
	Transportation	15,000	
	Contingencies	101,805	1,151,705
9.	*Rail:*		
	90 lb. A. R. A. rail, new 26,360 G. T. at 59.00	1,555,240	
	90 lb. A. R. A. rail S. H. 2,700 G. T. at 22.40	60,480	
	Handling	29,060	
	Transportation	9,800	
	Contingencies	76,820	1,731,400
2696 10.	*Other track material:*		
	90-lb. #10 spring frogs 52 at 125.00	6,500	
	90-lb. #9 rigid frogs 58 " 115.00	6,670	
	16' 6" split switches 100 " 125.00	12,500	
	Guard rails 200 " 28.00	5,600	
	Switch stands 100 " 30.00	3,000	
	90-lb. continuous joints, new 51,600 cwt. at 4.25	219,300	
	90-lb. " " S. H. 5,300 cwt. at .50	2,650	
	90-lb. tie plates, new 9,500 C. at 28.00	266,000	
	90-lb. " " S. H. 975 C. " 3.40	3,315	
	Bolt 4,100 cwt. 5.15	21,115	
	Anti-creeprs 1,350 C. at 30.00	40,500	
	Spikes 18,900 cwt. 3.60	68,040	
	Store expense	47,700	
	Transportation	2,400	
	Contingencies	80,360	799,400

Acct. No.			
11.	*Ballast:* 230,000 yds. at .75	$172,500	$172,500
12.	*Track laying & surfacing:*		
	Lay track 185 mi. at 2,700	499,500	
	Lay track 19 " " 2,300	43,700	
	Lay switches 100 " " 60	6,000	
	Placing anti-creepers 134,000 " .02	2,680	
	Overhead & plant expense	81,910	
	Contingencies	63,380	697,170
13.	*Right-of-way fence:* 185 mi. at 900	166,500	166,500
15.	*Crossings & signs:* 185 mi. at 100	18,500	18,500
16.	*Station and office buildings:*		
	Depots 6 at 5,000	30,000	
	Coal houses 6 " 200	1,200	
	Water supply 6 " 1,500	9,000	
	Outhouses 6 " 100	600	
	Stock yards 6 " 2,500	15,000	
	Transportation	2,000	
	Store & handling charges	1,500	
	Contingencies	5,900	65,200
17.	*Roadway buildings:*		
	14 section layouts, complete	------	
	14 sets at 6,000	84,000	
	Transportation	3,500	
	Store and handling charges	3,500	
	Contingencies	9,000	100,000
2697	18. *Water stations:*		
	65,000 gals 9 at 15,000	135,000	
	Transportation	5,400	
	Store and handling charges	5,400	
	Contingencies	14,200	160,000
19.	*Fuel stations:*		
	2–150 ton coal chutes at 38,500	76,000	
	Transportation	2,200	
	Store and handling	2,200	
	Contingencies	8,000	88,400
20.	*Shops and engine houses:*		
	2-stall engine houses 2 at 12,500	25,000	
	Cinder pits 2 " 4,000	8,000	
	Oil & store houses 2 " 3,500	7,000	
	Shop bldg., incl. blacksmith shop, at 6,500	6,500	
	Sand houses 2 at 2,000	4,000	
	Fire protection 2 " 1,000	2,000	
	Rip and wheel tracks 2 " 1,000	2,000	
	Transportation	2,000	
	Store and handling charges	2,000	
	Contingencies	5,500	64,000
26.	*Telephone and telegraph line* (complete): 185 mi. at 710	131,350	131,350
37.	*Roadway machines:* 19 sets at 550	10,450	10,450
38.	*Roadway small tools:* 19 sets at 300	5,700	5,700
44.	*Shop machinery:* 1 location (complete) at 10,000	10,000	10,000
73.	*Law:* 185 miles at 200	37,000	37,000
74.	*Taxes:* 185 miles at 400	74,000	74,000
76.	*Interest*	639,320	639,320
	Total		11,294,645
	Cost per mile of main track		61,052

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY.—Statement of expenses at present day costs for maintenance of way and structures of the main line owned and maintained by this company between Spokane and Ayer, Washington, for the calendar years 1915 to 1926, inclusive, which were made under the direction of the division superintendent but excluding expenses not under the control of the division superintendent

Special D-19-4-170.

Account	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915
201. Superintendence	$15,346.03	$14,585.67	$14,448.19	$15,159.96	$14,591.19	$17,459.04	$19,982.49	$15,330.52	$12,978.81	$18,961.07	$14,168.62	$12,923.37
202. Roadway maintenance	19,905.55	31,803.53	20,094.46	19,652.67	29,224.85	36,490.47	78,509.50	42,297.23	32,852.54	51,368.81	45,884.37	40,738.46
206. Tunnels and subways	3,888.64	4,213.08	3,192.19	2,163.41	1,931.20	1,147.10	357.35	2,254.39	426.11	619.59	235.83	111.00
208. Bridges, trestles, and culverts	9,869.67	7,873.47	3,012.79	9,710.89	6,709.42	29,803.03	22,400.32	3,265.15	16,745.72	30,080.79	4,399.37	7,000.78
210. Elevated structures	1,856.82	2,155.19	1,503.07	449.67	257.79	1,114.33	1,688.84			29.88	791.50	5.95
212. Ties	14,711.00	16,086.96	23,242.75	27,892.65	40,408.07	89,025.39	90,688.66	49,019.91	11,200.93	5,513.78	911.36	1,393.34
214. Rails	1,454.87	1,768.19	4,272.14	3,654.84	296.30	325.83	1,342.71	341.17	1,144.38	390.56	2,334.28	1,059.44
216. Other track material	4,315.41	1,653.79	1,956.94	1,966.98	1,444.78	1,071.86	757.60	1,171.97	904.36	2,085.43	2,708.52	1,651.13
218. Ballast	1,970.96	38.32	139.70	904.94	12.94		36.46	553.36	2,896.16	7,047.75	2,680.34	896.09
220. Track-laying and surfacing	49,940.84	46,971.97	56,866.46	54,670.97	48,421.37	85,839.12	122,043.79	68,746.06	57,277.45	69,542.51	50,096.19	59,127.00
221. Right-of-way fences	2,189.66	1,285.49	2,406.11	1,426.40	858.04	2,267.40	1,745.95	1,499.65	760.82	1,279.01	565.06	897.79
223. Snow and sand fences and snowsheds				227.93		69.09	187.87	88.04	15.10	46.75		33.42
225. Crossings and signs	869.61	2,381.79	1,623.26	1,923.64	506.38	2,448.00	1,950.25	1,737.31	1,427.45	1,627.63	1,728.18	970.03
227. Station and office buildings	4,709.51	3,170.22	2,840.17	8,146.61	3,444.03	4,398.89	3,855.85	3,604.33	2,695.87	9,513.02	2,752.95	2,323.75
229. Roadway buildings	2,017.22	2,127.06	2,293.57	3,552.70	2,149.50	1,378.61	1,508.22	653.31	1,194.26	2,809.89	1,074.67	927.64
231. Water stations	1,677.53	2,847.12	1,336.95	2,212.62	1,429.96	1,420.70	3,992.98	1,563.73	615.34	1,691.14	1,591.27	1,357.81
233. Fuel stations	90.79	257.73	447.15	672.35	309.30	576.39	278.78	211.04	81.68	167.50	361.44	389.61
235. Shops and enginehouses	997.29	1,291.65	832.42	2,349.55	2,379.60	1,357.45	1,466.34	1,624.70	858.78	2,398.23	1,509.06	621.23
247. Telegraph and telephone lines	2,202.86	843.51	1,227.97	1,110.18	3,519.17	1,556.16	986.70	812.97	664.18	575.20	773.03	713.10
249. Signals and interlockers	5,460.12	7,065.71	7,526.50	7,419.66	5,594.16	6,445.98	7,813.52	4,561.94	3,177.72	4,902.27	4,486.83	2,647.98
253. Power plant buildings	23.25	23.80	12.09	28.36	19.00	20.52	95.43	59.24	12.98	2.39	32.43	.78
259. Power distribution systems	150.29	135.11	207.63	381.04	790.80	257.03	421.82	228.59	128.51	147.61	216.17	19.52
265. Miscellaneous structures								19.86	13.29	66.13		
267. Paving					33							
269. Roadway machines	2,762.11	2,589.87	2,139.19	2,516.15	2,547.55	3,160.15	3,762.16	2,339.88	2,446.07	2,781.44	2,085.80	1,645.19
271. Small tools and supplies	4,550.79	4,693.84	3,192.54	3,404.13	3,862.98	5,827.25	6,016.33	3,840.87	3,923.50	7,790.20	8,019.21	2,644.28
272. Removing snow, ice, and sand	728.56	428.55	709.54	2,620.98	5,543.06	1,871.59	4,248.00	3,573.54	1,707.47	3,649.51	4,229.60	1,146.78
273. Assessments for public improvements	62.96	65.61		50.00								
274. Injuries to persons	229.99	313.78	274.25	20.00	5,985.90	1,312.34	899.55	423.70	176.52	42.45	1,263.18	1,193.62
276. Stationery and printing	304.23	260.91	279.02	327.37	298.67	503.84	585.02	428.58	270.53	451.85	575.47	315.09
277. Other expenses	241.35	283.66	74.63	732.68	2,367.50	337.40	122.51	241.38	14,722.82	36,182.61	6.27	8.14
Total	152,527.90	157,215.58	156,151.68	175,049.33	184,903.84	298,084.96	377,745.00	210,492.42	169,030.59	261,765.00	156,081.00	140,643.44

Auditor's office, Portland, Oregon, May 11, 1928. Requested by Mr. A. C. Spencer, General solicitor.

2699 *Exhibit 83—Dobbs*

Special D-19-4-170.

Oregon-Washington Railroad & Navigation Company—Statement of net railway operating income showing revenues and expenses by accounts, assignable to the Des Chutes Railroad Company, extending from Sherman, Oregon, to Bond, Oregon, as taken into the accounts of the Oregon-Washington Railroad & Navigation Company, for the calendar year 1926

Account		Amount
Revenues:		
101.	Freight	$439,259.09
102.	Passenger	30,037.68
103.	Excess baggage	616.04
104.	Sleeping-car	
105.	Parlor and chair car	
106.	Mail	15,129.68
107.	Express	6,898.20
108.	Other passenger-train	38.00
109.	Milk	212.48
110.	Switching	
111.	Special service train	
112.	Other freight-train	
131.	Dining and buffet	
132.	Hotel and restaurant	
133.	Station, train, and boat privileges	29.31
134.	Parcel room	
135.	Storage, freight	281.62
136.	Storage, baggage	
137.	Demurrage	520.00
138.	Telegraph and telephone	
139.	Grain elevator	
140.	Stockyard	
141.	Power	
142.	Rents of buildings and other property	47.27
143.	Miscellaneous	1,374.87
151.	Joint facility, credit	2,390.20
152.	Joint facility, debit	74.96
	Total operating revenues	496,759.48
Expenses:		
	Maintenance of way and structures	204,409.29
	Maintenance of equipment	97,943.43
	Traffic expenses	30,700.58
	Transportation expenses, rail line	116,881.44
	Miscellaneous operations expenses	
	General expenses	48,753.30
	Transportation for investment, credit	
	Total operating expenses	548,688.04
	Revenues over expenses (deficit)	51,928.56
	Total taxes	41,804.28
	Uncollectible railway revenues	11.46
	Railway operating income (deficit)	93,744.30
	Equipment rents, net, debit	95,296.22
	Joint facility rents, net, debit	66,644.69
	Net railway operating income (deficit)	255,685.21
2700	Maintenance of way and structures:	
201.	Superintendence	19,567.36
202.	Roadway maintenance	24,445.62
203.	Roadway, depreciation	
204.	Underground power tubes	
205.	Underground power tubes, depreciation	
206.	Tunnels and subways	3,652.22
207.	Tunnels and subways, depreciation	
208.	Bridges, trestles, and culverts	27,359.27

	Account	Amount
	Maintenance of way and structures—Continued.	
	209. Bridges, trestles, and culverts, depreciation	
	210. Elevated structures	
	211. Elevated structures, depreciation	
	212. Ties	$28,791.04
	213. Ties, depreciation	
	214. Rails	6,212.77
	215. Rails, depreciation	
	216. Other track material	3,550.84
	217. Other track material, depreciation	
	218. Ballast	2,735.55
	219. Ballast, depreciation	
	220. Track laying and surfacing	69,284.27
	221. Right-of-way fences	1,198.44
	222. Right-of-way fences, depreciation	
	223. Snow and sand fences and snowsheds	5.28
	224. Snow and sand fences and snowsheds, depreciation	
	225. Crossings and signs	182.07
	226. Crossings and signs, depreciation	
	227. Station and office buildings	1,696.29
	228. Station and office buildings, depreciation	
	229. Roadway buildings	2,978.11
	230. Roadway buildings, depreciation	
	231. Water stations	1,378.64
	232. Water stations, depreciation	
	233. Fuel stations	45.37
	234. Fuel stations, depreciation	
	235. Shops and enginehouses	
	236. Shops and enginehouses, depreciation	
	237. Grain elevators	
	238. Grain elevators, depreciation	
	239. Storage warehouses	
2701	240. Storage warehouses, depreciation	
	241. Wharves and docks	
	242. Wharves and docks, depreciation	
	243. Coal and ore wharves	
	244. Coal and ore wharves, depreciation	
	245. Gas producing plants	
	246. Gas producing plants, depreciation	
	247. Telegraph and telephone lines	642.77
	248. Telegraph and telephone lines, depreciation	
	249. Signals and interlockers	5.18
	250. Signals and interlockers, depreciation	
	251. Power plant dams, canals and pipe lines	
	252. Power plant dams, canals and pipe lines, depreciation	
	253. Power plant buildings	
	254. Power plant buildings, depreciation	
	255. Power substation buildings	
	256. Power substation buildings, depreciation	
	257. Power transmission system	
	258. Power transmission system, depreciation	
	259. Power distribution system	
	260. Power distribution system, depreciation	
	261. Power line poles and fixtures	
	262. Power line poles and fixtures, depreciation	
	263. Underground conduits	
	264. Underground conduits, depreciation	
	265. Miscellaneous structures	
	266. Miscellaneous structures, depreciation	
	267. Paving	
	268. Paving, depreciation	
	269. Roadway machines	370.11
	270. Roadway machines, depreciation	
	271. Small tools and supplies	1,791.60
	272. Removing snow, ice and sand	260.01
	273. Assessments for public improvements	
	274. Injuries to persons	57.22

Account	Maintenance of way and structures—Continued.	Amount
275.	Insurance	$624. 28
276.	Stationery and printing	341. 28
277.	Other expenses	97. 09
278.	Maintaining joint tracks, yards and other facilities, Dr	43, 308. 15
279.	Maintaining joint tracks, yards and other facilities, Cr	36, 171. 54
	Total maintenance of way and structures	204, 409. 29
2702	Maintenance of equipment:	
301.	Superintendence	3, 704. 52
302.	Shop machinery	2, 414. 25
303.	Shop machinery, depreciation	
304.	Power plant machinery	
305.	Power plant machinery, depreciation	
306.	Power substation apparatus	
307.	Power substation apparatus, depreciation	
308.	Steam locomotives, repairs	45, 334. 66
309.	Steam locomotives, depreciation	6, 475. 80
310.	Steam locomotives, retirements	75. 52
311.	Other locomotives, repairs	
312.	Other locomotives, depreciation	
313.	Other locomotives, retirements	
314.	Freight-train cars, repairs	21, 003. 15
315.	Freight-train cars, depreciation	5, 422. 11
316.	Freight-train cars, retirements	59. 99
317.	Passenger-train cars, repairs	3, 981. 39
318.	Passenger-train cars, depreciation	816. 32
319.	Passenger-train cars, retirements	250. 52
320.	Motor equipment of cars, repairs	
321.	Motor equipment of cars, depreciation	
322.	Motor equipment of cars, retirements	
323.	Floating equipment, repairs	
324.	Floating equipment, depreciation	
325.	Floating equipment, retirements	
326.	Work equipment, repairs	5, 764. 89
327.	Work equipment, depreciation	1, 345. 72
328.	Work equipment, retirements, Cr	29. 50
329.	Miscellaneous equipment, repairs	122. 60
330.	Miscellaneous equipment, depreciation	66. 97
331.	Miscellaneous equipment, retirements	5. 98
332.	Injuries to persons	66. 56
333.	Insurance	701. 55
334.	Stationery and printing	136. 09
335.	Other expenses	189. 30
336.	Maintaining joint equipment, Dr	471. 17
337.	Maintaining joint equipment, Cr	436. 13
	Total maintenance of equipment	97, 943. 43
2703	Traffic expenses:	
351.	Superintendence	7, 452. 09
352.	Outside agencies	14, 401. 90
353.	Advertising	5, 716. 08
354.	Traffic associations	584. 80
355.	Fast freight lines	
356.	Industrial and immigration bureaus	331. 84
357.	Insurance	14. 72
358.	Stationery and printing	1, 936. 55
359.	Other expenses	262. 60
	Total traffic expenses	30, 700. 58
	Transportation expenses, rail line:	
371.	Superintendence	11, 160. 17
372.	Dispatching trains	1, 938. 49
373.	Station employees	8, 729. 29

Account		Amount
Transportation expenses, rail line—Continued.		
374.	Weighing, inspection and demurrage bureaus	$429.05
375.	Coal and ore wharves	
376.	Station supplies and expenses	455.25
377.	Yardmasters and yard clerks	430.60
378.	Yard conductors and brakeman	716.95
379.	Yard switch and signal tenders	17.22
380.	Yard enginemen	469.35
381.	Yard motormen	
382.	Fuel for yard locomotives	423.06
383.	Yard switching power produced	
384.	Yard switching power purchased	
385.	Water for yard locomotives	20.45
386.	Lubricants for yard locomotives	6.45
387.	Other supplies for yard locomotives	8.61
388.	Enginehouse, expenses, yard	205.61
389.	Yard supplies and expenses	26.91
390.	Operating joint yards and terminals, Dr	26,605.82
391.	Operating joint yards and terminals, Cr	
392.	Train enginemen	26,506.89
393.	Train motormen	
394.	Fuel for train locomotives	27,028.68
395.	Train power produced	
396.	Train power purchased	
2704 397.	Water for train locomotives	3,812.29
398.	Lubricants for train locomotives	554.82
399.	Other supplies for train locomotives	579.27
400.	Enginehouse expenses, train	2,889.13
401.	Trainmen	32,425.71
402.	Train supplies and expenses	6,076.20
403.	Operating sleeping cars	
404.	Signal and interlocker operation	
405.	Crossing protection	
406.	Drawbridge operation	
407.	Telegraph and telephone operation	2,316.44
408.	Operating floating equipment	
409.	Express service	
410.	Stationery and printing	2,349.12
411.	Other expenses	1,353.99
412.	Operating joint tracks and facilities, Dr	9,100.91
413.	Operating joint tracks and facilities, Cr	3,699.39
414.	Insurance	532.93
415.	Clearing wrecks	12.90
416.	Damage to property	1,201.69
417.	Damage to livestock on right-of-way	82.97
418.	Loss and damage, freight	2,104.41
419.	Loss and damage, baggage	
420.	Injuries to persons	9.20
	Total transportation, rail line	166,881.44
General expenses:		
451.	Salaries and expenses of general officers	4,294.80
452.	Salaries and expenses of clerks and attendants	25,338.32
453.	General office supplies and expenses	3,367.18
454.	Law expenses	4,141.90
455.	Insurance	41.28
456.	Relief department expenses	
457.	Pensions	1,958.62
458.	Stationery and printing	1,302.83
459.	Valuation expenses	1,835.58
460.	Other expenses	5,553.11
461.	General joint facilities, Dr	2,343.68
462.	General joint facilities, Cr	1,424.00
	Total general expenses	48,753.30

Auditor's office, Portland, Oregon, September 6, 1927. Requested by Mr. A. C. Spencer, general solicitor.

2705 *Exhibit 84—Dodds*

Special F-19-4-178.

Oregon-Washington Railroad & Navigation Company, accounting department—statement of gross revenue based on divisions comparable with those allowed the Oregon Trunk Railway accruing to the Des Chutes branch for the year 1926

Received on Des Chutes branch	$134,000.34
Forwarded from Des Chutes branch	282,904.13
Local to Des Chutes branch	7,218.84
Moving via Des Chutes branch to and from city of Prineville Railroad	15,135.78
Total	439,259.09

Auditor's office, Portland, Oregon, September 1, 1927. Requested by Mr. A. C. Spencer, general solicitor.

2706 *Exhibit 85—Dodds*

Special F-19-4-178.

Oregon-Washington Railroad & Navigation Company, accounting department—statement of cars and tons, by commodities, of freight traffic forwarded from, received on, local to, and passing over Des Chutes branch for the year 1926

Commodity	Total		Forwarded from		Received on		Local to		Passing over	
	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons
Wheat	265	8,521	254	8,137	1	30	1	33	9	321
Corn	6	183			5	158			1	25
Oats	8	232			8	232				
Barley	3	70			3	70				
Other grain	4	110	2	52	1	30			1	28
Flour	32	797			29	726			3	71
Meal	1	20			1	20				
Other mill products	55	1,360	2	54	52	1,286	1	20		
Hay, straw, and alfalfa	245	3,939	188	2,980	2	50	32	505	23	404
Cotton seed and products (except oil)	1	20			1	20				
Apples (other than Californin)	1	20			1	20				
Other green fruit (other than Calif.)	9	126	1	29	8	107				
Potatoes	53	1,013	51	980	1	15			1	18
Melons and cantaloupes	4	49			4	49				
Other fresh vegetables	21	282			21	282				
Horses and mules	19	209	16	170					3	39
Cattle and calves	171	2,053	57	674	10	121	3	34	101	1,224
Sheep and goats	360	3,861	139	1,431	18	146	154	1,709	49	575
Hogs	5	51	3	28					2	23
Wool	41	586	26	365					15	221
Hides and leather	1	7	1	7						
Bituminous coal	52	2,275			42	1,822			10	453
2707 Coke	1	40			1	40				
Clay and earth	28	844	27	794	1	50				
Gravel	19	953			19	953				
Sand	21	1,095			21	1,095				
Other stone	3	109	1	12	2	97				
Salt	18	383			15	318			3	65
Sulphur	6	155			6	155				
Telegraph poles and piles	3	84			3	84				
Wood, fuel	120	2,762	86	1,799	2	87	32	876		
Ties	1	27			1	27				
Pulpwood	1	43	1	43						
Box stuff, cooperage, shooks, etc	484	12,958	484	12,958						
Lumber	4,099	109,270	4,000	106,777	32	855	2	25	65	1,613
Shingles and lath	18	435	6	143	12	292				
Other products of forests	2	28	2	28						
Kerosene, gasoline, and naphtha	97	3,063			92	2,907			5	156
Other petroleum oils	55	1,756	2	37	47	1,530			6	189
Sugar	22	489			19	428			3	61
Molasses, syrup, and glucose	1	18			1	18				
Iron, pig, and bloom	1	60			1	60				
Rails and fastenings	12	634			12	634				
Bar and sheet iron and steel	2	50			2	50				
Pipe and pipe fittings	27	599			27	599				

Oregon-Washington Railroad & Navigation Company, accounting department—Statement of cars and tons, by commodities, of freight traffic forwarded from, received on, local to, and passing over Des Chutes branch for the year 1926—Con.

Commodity	Total		Forwarded from		Received on		Local to		Passing over	
	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons	Cars	Tons
Structural iron and steel	1	20			1	20				
Sawmill and woodworking machinery	1	17			1	17				
2708 Other machinery	2	19			2	19				
Cement	18	674			17	649			1	2
Brick	8	269			8	269				
Lime and plaster	13	409			13	409				
Sewer pipe and drain tile	4	83			1	22	1	23	2	38
Agricultural implements	9	114			8	111			1	3
Automobiles and auto trucks	91	529	1	6	82	474			8	49
Household goods and second hand furniture	10	94	5	42	4	41			1	11
Bank, church, office and store furniture and fixtures	1	10			1	10				
Cider, grape juice, near beer, pop, etc	4	63			4	63				
Fertilizers (all kinds)	19	587	19	587						
Explosives	4	50			3	44			1	6
Condensed milk, canned	3	62			3	62				
Fruits and vegetables, canned	2	74			2	74				
Paper, building	1	21			1	21				
Soap	3	75			3	75				
Wire and nails	1	41			1	41				
Other manufactures	19	456	6	107	13	349				
Campers and graders outfits	5	76	2	23	3	53				
Empty cases and carriers, returned	2	20	2	20						
Railroad rolling stock	1	20			1	20				
Scrap iron	4	153	2	82	2	71				
Other miscellaneous commodities	12	215	3	37	9	178				
Merchandise		4,963		376		4,173		89		325
Grand total	6,636	170,763	5,389	138,778	707	22,728	226	3,314	314	5,943

Auditor's office, Portland, Oregon, September 1, 1927. Requested by Mr. A. C. Spencer, general solicitor.

2709 *Exhibit 86*

Special F-19-4-496.

Oregon-Washington Railroad & Navigation Company, accounting department—Statement of shipments of alfalfa hay and hay not specified as to kind on waybills, originating on O.-W. R. R. & N. Company and destined to points in western Oregon during the years 1926 and 1927

YEAR 1926

Sheets 1-6 of 11 sheets.

Station from—	Station to—	Cars	Tons
Baird, Wash	East Portland, Ore	1	13
Baker, Ore	Newberg, "	2	30
Barrett, "	Astoria, "	3	34
" "	East Portland, "	2	27
" "	Fir, "	2	26
" "	Miami, "	1	13
" "	Portland, "	1	15
Bend, "	East Portland, "	8	126
" "	Mill City, "	1	16
Benton City, Wash	East Portland, "	3	43
Boardman, Ore	Beverton, "	1	14
" "	East Portland, "	11	146
" "	Kenton, "	1	11
" "	Lents, "	3	43
" "	Toledo, "	1	14
Capps, "	East Portland, "	1	19
Condon, Ore	" "	1	13
Culver, "	Astoria, "	1	19
" "	Beaverton, "	1	15
" "	Bertha, "	2	38
" "	Hillsboro, "	2	26
" "	Hoover Spur, "	1	13

Oregon-Washington Railroad & Navigation Company, accounting department—Statement of shipments of alfalfa hay and hay not specified as to kind on waybills, originating on O.-W. R. R. & N. Company and destined to points in western Oregon during the years 1926 and 1927—Continued

YEAR 1926—Continued

Station from—	Station to—	Cars	Tons
Deschutes, Ore.	Barlow, Ore.	1	15
" "	Connell, "	1	15
" "	East Portland, "	7	118
" "	Fairview, "	1	13
" "	Kenton, "	1	14
" "	McMinnville, "	2	32
" "	No. Port. stk. yds., "	1	20
" "	St. Helens, "	2	41
" "	Tillamook, "	1	14
Echo, "	Adamsboro, "	1	15
" "	East Portland, "	11	183
" "	Gresham, "	1	18
" "	Hoover Spur, "	2	28
" "	Mohler, "	1	12
" "	No. Port. stk. yds., "	1	19
" "	Oregon City, "	1	19
" "	Portland, "	1	21
" "	St. Helens, "	2	30
" "	Silverton, "	1	25
Elgin, "	East Portland, "	1	14
Emerald, Wash.	" "	2	25
"	Portland, "	1	12
Ewing, Ore.	East Portland, "	3	40
Glencove, "	Astoria, "	1	16
" "	East Portland, "	2	37
Grosscup, Wash.	" "	4	61
" "	Latourell, "	1	18
" "	Troutdale, "	1	13
Total		104	1,635
2710 Haines, Ore.	Astoria, Ore.	3	44
" "	East Portland, "	19	275
" "	No. Port. stk. yds., "	10	135
" "	Pendleton, "	1	17
" "	Portland, "	1	12
Harriett, "	Blodgett, "	2	29
Hedges, Wash.	East Portland, "	2	28
" "	Troutdale, "	1	14
Heppner, Ore.	East Portland, "	2	22
Hermiston, "	Albina, "	2	27
" "	Aloha, "	1	11
" "	Astoria, "	6	95
" "	Banks, "	1	18
" "	Beverton, "	1	11
" "	Cedar Point, "	1	12
" "	Clackamas, "	1	17
" "	Coquille, "	1	14
" "	Corbett, "	1	13
" "	Cornelius, "	2	36
" "	East Portland, "	60	989
" "	Estacada, "	2	30
" "	Eugene, "	1	13
" "	Fairview, "	4	60
" "	Forest Grove, "	3	43
" "	Hillsboro, "	3	37
" "	Hubbard, "	1	14
" "	Kenton, "	5	71
" "	Milwaukie, "	3	37
" "	Mohler, "	5	78
" "	Myrtle Point, "	1	14
" "	Newberg, "	3	42
" "	No. Port. stk. yds., "	69	1,031
" "	Oregon City, "	3	46
" "	Rainier, "	5	70
" "	Raleigh, "	1	14
" "	St. Helens, "	4	57
" "	Seaside, "	2	28
" "	Shattuck, "	4	57
" "	Tigard, "	2	28
" "	Tillamook, "	21	327
" "	Toledo, "	4	61
" "	Troutdale, "	2	31
" "	Turner, "	1	13
" "	Vernonia, "	1	18
" "	Warren, "	5	77
" "	Wilsonville, "	1	13

Oregon-Washington Railroad & Navigation Company, accounting department—Statement of shipments of alfalfa hay and hay not specified as to kind on waybills, originating on O.-W. R. R. & N. Company and destined to points in western Oregon during the years 1926 and 1927—Continued

YEAR 1926—Continued

Station from—	Station to—	Cars	Tons
Hinkle, Ore.	Astoria, Ore.	5	80
" "	Boring, "	2	33
" "	Charlton, "	1	13
" "	Corbett, "	1	12
" "	East Portland, "	46	691
" "	Fairview, "	4	71
" "	Fir, "	1	15
" "	Forest Grove, "	1	17
" "	Hillsboro, "	1	15
" "	Hubbard, "	1	15
" "	Kenton, "	6	91
" "	Mohler, "	5	86
Total		357	5,266
2711 Hinkle, Ore.	Molalla, Ore.	1	15
" "	No. Port. stk. yds., "	32	508
" "	St. Helens, "	1	12
" "	Salem, "	1	16
" "	Seaside, "	1	18
" "	Shattuck, "	1	14
" "	Tillamook, "	11	162
Hot Lake "	No. Port. stk. yds., "	1	18
Hutchinson "	East Portland, "	1	14
Ione "	Albina, "	1	18
" "	Astoria, "	1	19
" "	East Portland, "	7	120
" "	Goble, "	1	19
" "	Hillsboro, "	1	15
" "	Kenton, "	1	17
" "	Tillamook, "	2	35
Irrigon "	Astoria, "	2	28
" "	East Portland, "	15	236
" "	Hillsboro, "	1	14
" "	Marshfield, "	1	14
" "	Tillamook, "	1	14
" "	Timber, "	1	13
" "	Toledo, "	1	15
Island City "	No. Port. stk. yds., "	12	246
Jordan "	East Portland, "	3	48
" "	Mohler, "	2	36
" "	Reedville, "	1	15
" "	Tillamook, "	2	36
Joseph "	Astoria, "	1	13
" "	East Portland, "	4	61
" "	Mohler, "	2	26
" "	No. Port. stk. yds., "	1	15
" "	Park Place, "	2	32
" "	Portland, "	1	12
" "	Tillamook, "	6	90
" "	Vernonia, "	1	17
Lowden, Wash.	East Portland, Ore.	3	38
Messner, Ore.	Clatskanie, "	1	17
" "	Corbett, "	1	13
" "	Cushman, "	1	20
" "	East Portland, "	18	276
" "	Eugene, "	1	20
" "	Fairview, "	2	33
" "	St. Helens, "	1	16
" "	Tillamook, "	1	17
Midvale, Wash.	East Portland, Ore.	1	14
Milton, Ore.	Tillamook, "	5	68
No. Port. s. yds., Ore.	Adamsboro, "	1	19
Olequa, Wash.	East Portland, "	1	13
Peters, Ore.	Astoria, "	1	15
" "	East Portland, "	41	566
" "	Fir, "	1	13
" "	Hubbard, "	2	34
" "	Kenton, "	2	31
" "	No. Port. stk. yds., "	1	14
" "	Rainer, "	1	15
" "	Ray, "	1	18
" "	St. Helens, "	1	15
" "	Tillamook, "	1	14
Total		213	3,133

Oregon-Washington Railroad & Navigation Company, accounting department—Statement of shipments of alfalfa hay and hay not specified as to kind on waybills, originating on O.-W. R. R. & N. Company and destined to points in western Oregon during the years 1926 and 1927—Continued

YEAR 1926—Continued

	Station from—	Station to—	Cars	Tons
2712	Prineville jct., Ore	Corvallis, Ore	1	13
	" " "	Aloha, "	1	15
	" " "	Reedville, "	1	15
	Redmond, Ore	Aloha, "	1	17
	" "	Astoria, "	1	12
	" "	Banks, "	1	15
	" "	Beaverton, "	8	129
	" "	Brownsmead, "	1	15
	" "	Cormick, "	2	42
	" "	East Portland, "	33	534
	" "	Estacada, "	1	15
	" "	Fairview, "	10	150
	" "	Fir, "	2	30
	" "	Helvetia, "	2	32
	" "	Hillsboro, "	2	31
	" "	Holbrook, "	1	20
	" "	Holladay, "	2	34
	" "	Kenton, "	3	39
	" "	Mayger, "	2	35
	" "	Milwaukie, "	1	15
	" "	Mohler, "	2	33
	" "	Portland, "	1	14
	" "	Rainier, "	2	32
	" "	Ruby, "	1	13
	" "	Scappoose, "	2	30
	" "	Tillamook, "	5	82
	" "	Toledo, "	1	20
	Rock Creek "	Albina, "	1	17
	" "	Astoria, "	1	13
	" "	East Portland, "	17	280
	" "	Hillsboro, "	2	35
	" "	Reedville, "	1	21
	" "	Seaside, "	2	32
	South jct "	Helvetia, "	1	13
	Stanfield "	Adamsboro, "	2	33
	" "	Albina, "	1	11
	" "	Astoria, "	2	35
	" "	Aloha, "	2	31
	" "	Albany, "	1	13
	" "	Banks, "	1	11
	" "	Barlow, "	1	13
	" "	Coquille, "	3	46
	" "	Corbett, "	3	42
	" "	Corvallis, "	1	13
	" "	Cottage Grove, "	1	14
	" "	Cushman, "	3	43
	" "	Dallas, "	2	30
	" "	East Portland, "	73	1,098
	" "	Eugene, "	1	13
	" "	Fairview, "	14	206
	" "	Fir, "	8	120
	" "	Forest Grove, "	2	32
	" "	Hillsboro, "	2	25
	" "	Huber, "	1	14
	" "	Kenton, "	6	84
	" "	Lasen, "	1	12
	" "	Marshfield, "	1	21
	" "	Newberg, "	1	16
	Total		248	3,819
2713	Stanfield, Ore	No. Port. stk. yds., Ore	38	595
	" "	Noti, "	1	13
	" "	Oregon City, "	2	27
	" "	Park Place, "	1	14
	" "	Portland, "	4	68
	" "	Powers, "	1	14
	" "	Rainier, "	3	34
	" "	St. Helen, "	2	28
	" "	Shattuck, "	2	30
	" "	Tigard, "	3	39
	" "	Tillamook, "	1	12
	" "	Toledo, "	1	13
	" "	Warren, "	1	18
	" "	Wilkesboro, "	1	13

Oregon-Washington Railroad & Navigation Company, accounting department—Statement of shipments of alfalfa hay and hay not specified as to kind on waybills, originating on O.-W. R. R. & N. Company and destined to points in western Oregon during the years 1926 and 1927—Continued

YEAR 1926—Continued

Station from—	Station to—	Cars	Tons
Terrebonne Ore	Albina, Ore	1	15
" "	Astoria, "	1	17
" "	East Portland, "	11	186
" "	Fairview, "	2	34
" "	Forest Grove, "	1	16
" "	Gaston, "	1	18
" "	Hillsboro, "	2	33
" "	Milwaukie, "	4	51
" "	Mohler, "	1	16
" "	No. Plains, "	1	18
" "	No. Port. stk. yds., "	1	13
" "	Rainier, "	2	32
" "	Raleigh, "	3	42
" "	Reedville, "	1	16
" "	Tillamook, "	1	16
Touchet, Wash	Adamsboro, "	1	17
" "	Astoria, "	4	70
" "	East Portland, "	52	773
" "	Estacada, "	2	34
" "	Fairview, "	5	81
" "	Mollala, "	1	15
" "	No. Port. stk. yds., "	23	353
" "	Perrydale, "	1	14
" "	Rainier, "	1	13
" "	Reedville, "	1	14
" "	Seaside, "	1	11
Umapine, Ore	Adair, "	1	17
" "	Clatskanie, "	1	14
" "	Corbett, "	1	14
" "	Corvallis, "	1	14
" "	East Portland, "	17	248
" "	Estacada, "	1	14
" "	Fairview, "	1	13
" "	Fir, "	1	19
" "	Forest Grove, "	1	17
" "	Hauser, "	1	12
" "	Marshfield, "	1	14
" "	No. Port. stk. yds., "	5	77
" "	Rainier, "	1	14
" "	Tigard, "	1	10
" "	Tillamook, "	3	43
" "	Toutdale, "	1	13
Umatilla "	Cornelius, "	2	34
" "	East Portland, "	14	213
Total		240	3,636
2714 Umatilla, Ore	Fairview, Ore	7	92
" "	Kenton, "	2	35
" "	Newberg, "	1	12
" "	No. Port. stk. yds., "	13	218
" "	Oregon City, "	1	15
" "	Robbins, "	1	16
" "	Tigard, "	1	14
Westland "	Astoria, "	3	49
" "	East Portland, "	1	17
Weston "	Tigard, "	1	20
Total		31	488

RECAPITULATION

Total Sheet No. 1	104	1,635
" " " 2	357	5,268
" " " 3	213	3,333
" " " 4	248	3,819
" " " 5	240	3,636
" " " 6	31	488
Grand total	1,193	18,179

Oregon-Washington Railroad & Navigation Company, accounting department—Statement of shipments of alfalfa hay and hay not specified as to kind on waybills, originating on O.-W. R. R. & N. Company and destined to points in western Oregon during the years 1926 and 1927—Continued

YEAR 1927 Sheets 6-11 of 11 sheets.

Station from—	Station to—	Cars	Tons
Alicel, Ore.	Fairview, Ore.	1	19
Baird Wash.	East Portland, "	1	12
Barrett Ore.	Astoria, "	1	14
" "	Marshfield, "	1	16
" "	Portland, "	1	13
" "	Rainier, "	1	14
" "	Tillamook, "	1	12
Benton City, Wash.	East Portland, "	9	111
Boardman, Ore.	Astoria, "	1	14
" "	Beaverton, "	3	49
" "	East Portland, "	12	175
" "	Fairview, "	8	121
" "	Fir, "	6	89
" "	Independence, "	1	12
" "	Kenton, "	2	24
" "	Milwaukie, "	1	18
" "	Park Place, "	1	15
" "	Salem, "	1	16
" "	Svenson, "	1	13
Cecil "	Astoria, "	1	18
" "	East Portland, "	9	164
" "	Fairview, "	1	14
" "	Kenton, "	2	38
" "	Portland, "	1	18
Total		67	1,009
2715 East Portland, Ore.	Fairview, Ore.	1	18
Echo, "	Adamsboro, "	1	15
" "	Astoria, "	1	17
" "	Banks, "	1	16
" "	Corvallis, "	1	18
" "	Coquille, "	1	16
" "	East Portland, "	5	71
" "	Fairview, "	1	14
" "	Fir, "	1	14
" "	Mohler, "	1	12
" "	No. Port. stk. yds., "	13	195
" "	Salem, "	1	15
" "	Tillamook, "	5	79
" "	Valsetz, "	1	12
Emerald, Wash.	East Portland, "	4	53
" "	Fir, "	1	13
Ewing, Ore.	Milwaukie, "	1	12
Glencove, "	Newberg, "	1	15
" "	Chitwood, "	1	12
" "	Corvallis, "	1	15
" "	Fairview, "	2	28
" "	Fir, "	1	14
Grosscup, Wash.	Seaside, "	1	13
" "	East Portland, "	1	15
Haines, Ore.	Portland, "	2	34
" "	Astoria, "	2	30
" "	East Portland, "	19	268
" "	Fair Grounds, "	1	14
" "	Fairview, "	1	14
" "	No. Port. stk. yds., "	9	148
" "	Portland, "	2	27
" "	Seaside, "	2	28
Heppner, "	East Portland, "	1	19
" "	Marshfield, "	1	13
Hermiston, "	Salem, "	1	13
" "	Albany, "	1	12
" "	Albina, "	5	69
" "	Astoria, "	5	63
" "	Benson landing, "	1	15
" "	Clatskanie, "	1	16
" "	Coquille, "	3	39
" "	Corbett, "	2	30
" "	Creswell, "	1	12
" "	Dry Creek, "	1	15
" "	East Portland, "	69	1,024
" "	Estacada, "	1	14
" "	Eugene, "	5	72
" "	Fair Grounds, "	1	14
" "	Fairview, "	8	121
" "	Fir, "	1	18

Oregon-Washington Railroad & Navigation Company, accounting department—Statement of shipments of alfalfa hay and hay not specified as to kind on waybills, originating on O.-W. R. R. & N. Company and destined to points in western Oregon during the years 1926 and 1927—Continued

YEAR 1927—Continued

	Station from—	Station to—	Cars	Tons
	Hermiston, Ore.	Foss, Ore.	1	13
	" "	Haddon, "	1	15
	" "	Hillsboro, "	1	17
	" "	Kenton, "	2	25
	" "	Lafayette, "	1	13
	" "	Lasen, "	1	13
	" "	Marshfield, "	4	65
	Total		205	3,003
2716	Hermiston, Ore.	Milwaukie, Ore.	2	31
	" "	Newberg, "	3	38
	" "	No. Port. stk. yds., "	34	497
	" "	Oregon City, "	4	54
	" "	Philomath, "	1	12
	" "	Reedville, "	1	11
	" "	Seaside, "	1	17
	" "	Tigard, "	2	25
	" "	Tillamook, "	29	434
	" "	Turner, "	1	12
	" "	Vernonia, "	1	12
	" "	Westport, "	1	12
	Hinkle, "	Albany, "	1	15
	" "	Astoria, "	4	63
	" "	Corbett, "	1	17
	" "	Creswell, "	1	18
	" "	East Portland, "	75	1,125
	" "	Eugene, "	3	44
	" "	Flarview, "	4	58
	" "	Fir, "	4	59
	" "	Forest Grove, "	1	13
	" "	Hillsboro, "	5	78
	" "	Holbrook, "	1	14
	" "	Junction City, "	1	14
	" "	Kenton, "	3	43
	" "	Marshfield, "	3	43
	" "	Mohler, "	5	77
	" "	North Plains, "	1	16
	" "	No. Port. stk. yds., "	51	758
	" "	St. Helens, "	1	17
	" "	Seaside, "	1	15
	" "	Tillamook, "	44	656
	" "	Warren, "	1	12
	Imbler, "	East Portland, "	1	14
	" "	Fairview, "	1	14
	Ione, "	East Portland, "	4	59
	" "	Marshfield, "	1	16
	" "	McMinnville, "	1	16
	" "	Mohler, "	1	12
	" "	No. Port. stk. yds., "	2	25
	" "	St. Helens, "	1	12
	" "	Tillamook, "	4	59
	Irrigon, "	Astoria, "	1	14
	" "	Coquille, "	1	14
	" "	East Portland, "	7	106
	" "	Eugene, "	2	30
	" "	Fairview, "	3	43
	" "	No. Port. stk. yds., "	2	30
	" "	Oregon City, "	1	13
	" "	Park Place, "	1	12
	" "	Tillamook, "	2	32
	Island City, "	East Portland, "	2	33
	Jordan, "	Corvallis, "	1	16
	" "	East Portland, "	7	98
	" "	Marshfield, "	2	32
	" "	No. Port. stk. yds., "	4	64
	" "	Scappoose, "	1	12
	Total		344	5,122
2717	Kennewick, Wash.	Troutdale, Ore.	3	47
	Lowden, "	Astoria, "	4	55
	" "	East Portland, "	25	388
	" "	Fairview, "	3	46
	" "	No. Port. stk. yds. "	3	58
	Meek, Ore.	Portland, "	4	56
		East Portland, "	3	49

Oregon-Washington Railroad & Navigation Company, accounting department—Statement of shipments of alfalfa hay and hay not specified as to kind on waybills, originating on O.-W. R. R. & N. Company and destined to points in western Oregon during the years 1926 and 1927—Continued

YEAR 1927—Continued

Station from—	Station to—	Cars	Tons
Messner, Ore.	Astoria Ore.	7	120
" "	Beaverton, "	1	20
" "	Clackamas, "	1	20
" "	East Portland, "	23	34
" "	Fairview, "	6	96
" "	Fir, "	1	14
" "	Kendall, "	1	20
" "	Kenton, "	1	12
" "	Lafayette, "	1	20
" "	Mollala, "	1	16
" "	Portland, "	1	13
" "	Scappoose, "	1	20
" "	Seaside, "	1	20
" "	Simpson, "	1	20
" "	Vernonia, "	1	20
Midvale, Wash.	East Portland, "	1	14
" "	Portland, "	1	14
Milton, Ore.	Holbrook, "	1	17
" "	Marshfield, "	1	16
Mumford, "	Corvallis, "	1	14
" "	Mapleton, "	1	14
" "	Marshfield, "	1	14
" "	Miami, "	1	14
" "	Mohler, "	1	15
" "	Vernonia, "	1	14
Peters, "	Astoria, "	3	46
" "	Clackamas, "	1	12
" "	East Portland, "	13	174
" "	Fairview, "	2	29
" "	Kenton, "	1	16
" "	Marshfield, "	1	13
" "	Perrydale, "	1	14
" "	Rainier, "	1	16
" "	St. Helens, "	1	13
" "	Salem, "	1	11
Stanfield, "	Albaina, "	1	13
" "	Aloha, "	1	18
" "	Astoria, "	5	75
" "	Banks, "	1	13
" "	Clatskanie, "	1	12
" "	Coquille, "	4	57
" "	Cornelius, "	2	29
" "	Cottage Grove, "	1	17
" "	Dallas, "	1	14
" "	East Portland "	70	984
" "	Estacada, "	1	16
" "	Eugene, "	5	64
" "	Fair Grounds, "	1	11
" "	Fairview, "	5	76
" "	Fir, "	6	88
Total		233	3,449
2718 Stanfield, Ore.	Forest Grove, Ore.	1	12
" " "	Hillsboro, "	2	33
" " "	Junction City, "	1	14
" " "	Kendall, "	1	12
" " "	Kenton, "	4	65
" " "	Latourell, "	1	15
" " "	Marshfield, "	2	27
" " "	Mayger, "	1	14
" " "	Milwaukie, "	1	15
" " "	Mohler, "	6	91
" " "	Myrtle Point, "	2	27
" " "	No. Port. stk. yds., "	77	1,217
" " "	Noti, "	1	13
" " "	Oregon City, "	4	53
" " "	Rainer, "	2	24
" " "	Salem, "	1	13
" " "	Seaside, "	1	14
" " "	Stanley, "	1	15
" " "	Tigard, "	3	39
" " "	Tillamook, "	16	259
" " "	Troutdale, "	1	13
Sunnyside, Wash.	No. Port. stk. yds., "	4	58

Oregon-Washington Railroad & Navigation Company, accounting department—Statement of shipments of alfalfa hay and hay not specified as to kind on waybills, originating on O.-W. R. R. & N. Company and destined to points in western Oregon during the years 1926 and 1927—Continued

YEAR 1927—Continued

Station from—	Station to—	Cars	Tons
Touchet, Wash.	Adamsboro, Ore.	2	29
" "	Astoria, "	13	198
" "	Beaverton, "	1	12
" "	Benson Landing, "	1	19
" "	Bridal Veil, "	1	15
" "	Corbett, "	2	30
" "	Corvallis, "	1	14
" "	East Portland, "	88	1,322
" "	Estacada, "	2	24
" "	Fairview, "	5	71
" "	Fir, "	1	14
" "	Huber, "	1	13
" "	Kenton, "	2	28
" "	Milwaukie, "	1	20
" "	No. Port. stk. yds., "	10	169
" "	Portland, "	2	29
" "	Rainier, "	1	15
" "	Ruby, "	1	14
" "	St. Helens, "	2	30
" "	Troutdale, "	1	13
" "	Vernonia, "	2	28
Umapine, Ore.	Astoria, "	8	122
" "	Broadbent, "	1	13
" "	Corvallis, "	1	12
" "	Cottage, Gove "	1	13
" "	Coquille, "	1	15
" "	Corvallis, "	1	12
" "	East Portland, "	10	127
" "	Estacada, "	1	12
" "	Eugene, "	1	11
" "	Fairview, "	8	107
" "	Fir, "	1	17
" "	Hauser, "	1	13
" "	Kenton, "	2	31
" "	Marion, "	1	14
Total		311	4,668
2719 Umapine, Ore.	Marshfield, Ore.	4	58
" "	Mayger "	1	13
" "	Myrtle Point "	1	13
" "	Portland "	4	67
" "	Rainier "	2	27
" "	Seaside "	1	10
" "	Tillamook "	8	121
" "	Vernonia "	1	12
" "	Yoncalla "	1	13
Umatilla	Coquille "	1	14
" "	East Portland "	12	176
" "	Eugene "	2	29
" "	Fairview "	1	16
" "	Hillsboro "	1	14
" "	Huber "	1	16
" "	Lebanon "	1	13
" "	Marshfield "	3	49
" "	Mohler "	1	12
" "	Rainier "	2	29
" "	Reedville "	1	18
" "	Tillamook "	8	128
Vancouver, Wash.	No. Port. stk. yds. "	1	11
Westland, Ore.	East Portland "	6	107
" "	Eugene "	1	15
" "	Fir "	1	15
" "	Forest Grove "	1	15
Woodland, Wash.	East Portland "	1	16
Total		68	1,025

Oregon-Washington Railroad & Navigation Company, accounting department—Statement of shipments of alfalfa hay and hay not specified as to kind on waybills, originating on O.-W. R. R. & N. Company and destined to points in western Oregon during the years 1926 and 1927—Continued

RECAPITULATION

Station from—	Station to—	Cars	Tons
	Total sheet No. 6	67	1,009
	" " " 7	205	3,003
	" " " 8	344	5,122
	" " " 9	233	3,449
	" " " 10	311	4,668
	" " " 11	68	1,025
Grand total		1,228	18,276

GRAND RECAPITULATION

	Total year 1926	1,193	18,179
	" " 1927	1,228	18,276
Grand total		2,421	36,455

Auditor's office, Portland, Oregon, July 13, 1928. Requested by Mr. A. C. Spencer, general solicitor.

2720

Exhibit 87.—Dodds

Oregon Washington Railroad & Navigation Company—Income and profit & loss for years, 1921–1927, incl.

	1921	1922	1923	1924	1925	1926	1927
Income account:							
Railway operating income	29,818,741	28,140,055	30,227,112	28,775,558	27,872,713	30,510,001	29,125,539
Railway operating expenses	26,577,579	26,401,191	25,847,702	22,631,706	22,456,459	22,330,487	22,205,867
Net revenue from railway operations	3,241,162	1,738,864	4,379,410	6,143,852	5,416,254	8,179,514	6,919,672
Railway tax accruals	2,189,240	2,136,981	1,996,144	2,023,719	2,044,331	2,226,006	2,389,230
Uncollectible railway, revenues	10,879	1,160	4,284	5,119	567	2,036	1,722
Railway operating income	1,041,043	*399,277*	2,378,982	4,115,014	3,371,356	5,951,472	4,528,720
Miscellaneous operating income	31,507	*40,541*	29,142	26,404	8,829	*1,980*	*16,538*
Total, operating income	1,072,550	*439,818*	2,408,124	4,141,418	3,390,185	5,949,552	4,512,182
Nonoperating income:							
Hire of equipment, net							
Joint facility rent income	548,699	561,457	561,902	572,920	588,845	578,354	572,027
Income from lease of road	429,370	429,822	430,450	430,857	459,734	460,401	461,845
Miscellaneous rent income	39,425	42,319	43,079	48,050	69,286	120,426	124,591
Dividend income		[1] 250,000	[1] 250,000	[1] 250,000			
Income from securities and accounts	44,119	128,961	75,000	50,389	62,590	76,710	74,421
Federal guaranty period settlement			1,665,398				
Miscellaneous income	26,879	38,962	76,456	32,985	55,770	87,611	85,444
Total nonoperating income	1,088,492	1,451,521	3,102,285	1,385,201	1,236,225	1,323,505	1,318,328
Gross income	2,161,042	1,011,703	5,510,409	5,526,619	4,626,410	7,273,057	5,830,510

[1] San Francisco & Portland Steamship Company

Oregon Washington Railroad & Navigation Company—Income and profit & loss for years, 1921–1927, incl.—Continued

	1921	1922	1923	1924	1925	1926	1927
Deductions from gross income:							
Hire of equipment, net	464,047	263,427	573,832	487,527	545,416	584,483	790,166
Joint facility rents	1,252,120	1,275,028	1,272,659	1,243,772	1,285,047	1,282,614	1,379,835
Miscellaneous income charges	40,626	37,885	32,790	35,643	22,566	50,402	28,104
Interest on funded debt	3,802,038	3,802,396	3,802,459	3,802,573	3,802,730	3,802,878	3,802,969
Interest on unfunded debt	88,536	87,413	85,915	88,224	89,455	84,592	94,932
Amortization of discount on funded debt		66,615	66,615	66,615	66,615	66,615	66,615
Total deductions from gross income	5,647,367	5,532,764	5,834,270	5,724,354	5,811,829	5,871,584	6,172,641
Net income (italic, loss; roman, profit)	*3,486,325*	*4,521,061*	*323,861*	*197,735*	*1,185,419*	1,401,473	*342,131*
Profit and loss:							
Credits—							
Balance at beginning of year (loss)	*799,667*	*2,391,148*	*6,896,798*	*7,152,747*	*7,339,811*	*8,611,460*	*7,434,424*
Credit balance transferred from income (profit)						1,401,473	
Profit on road and equipment sold	9,951	82,708	153,392	14,548	10,551	75,555	127,287
Miscellaneous credits	[1]2,064,987	21,129	40,941	63,566	52,914	81,225	73,449
Total	1,295,271	*2,287,311*	*6,702,465*	*7,054,633*	*7,276,346*	*7,053,207*	*7,233,688*
Debits—							
Loss on retired road and equipment	41,490	74,207	60,985	37,082	87,323	353,134	61,935
Debit balance transferred from income (loss)	3,486,325	4,521,061	323,861	197,735	1,185,419		342,131
Miscellaneous debits	158,604	14,219	45,436	50,361	62,372	28,083	20,827
Total	3,686,419	4,609,487	430,282	285,178	1,335,114	381,217	424,893
Total loss	*2,391,148*	*6,896,798*	*7,132,747*	*7,339,811*	*8,611,460*	*7,434,424*	*7,658,581*

[1] Includes $1,879,783, U. S. Government Federal Control Settlement.

All figures in even dollars.
Auditor's Office, Portland, Oregon, June 4, 1928.

2721 *Exhibit 88—Dodds*

Oregon-Washington Railroad & Navigation Company—General Balance Sheet as of December 31, 1927

Special D-19-4-170.

ASSETS	
Investments:	
701. Investment in road and equipment	$173,201,763.68
702. Improvements in leased railway property	7,696.42
705. Miscellaneous physical property	512,697.59
706. Affiliated companies:	
Stocks:	
Unpledged	50,000.00
Advances	1,816,409.58
707. Other investments:	
Stocks:	
Unpledged	50.44
Bonds:	
Unpledged	121,250.00
Notes	62,500.00
Total	175,772,367.71
Current assets:	
708. Cash	986,650.55
711. Special deposits	30,232.84
712. Loans and bills receivable	46.35
713. Traffic and car-service balances receivable	1,081,485.82
714. Net balance receivable from agents and conductors	205,181.83
715. Miscellaneous accounts receivable	674,426.05
716. Material and supplies	2,643,038.25
717. Interest and dividends receivable:	
Interest	8,617.06
718. Rents receivable	112,191.50
719. Other current assets	19,988.48
Total	5,761,858.73
Deferred assets:	
720. Working-fund advances	17,978.27
722. Other deferred assets	515,128.44
Total	533,106.71
Unadjusted debits:	
723. Rents and insurance premiums paid in advance	2,746.51
725. Discount on funded debt	2,203,848.66
727. Other unadjusted debits	708,623.78
Total	2,915,218.95
Total assets	184,982,552.10

LIABILITIES	
Stock:	
751. Capital stock:	
Common stock	$50,000,000.00
Government grants:	
754. Grants in aid of construction	53,033.55
Long-term debt:	
755. Funded debt unmatured:	
Mortgage bonds	95,074,575.00
757. Affiliated companies:	
Open accounts	25,973,759.77
Total	171,101,368.32
Current liabilities:	
759. Traffic and car-service balances payable	160,747.45
760. Audited accounts and wages payable	1,891,160.77
761. Miscellaneous accounts payable	105,591.36
762. Interest matured unpaid	1,451,966.35
764. Funded debt matured unpaid	3,000.00
766. Unmatured interest accrued	77,933.33
767. Unmatured rents accrued	377,730.67
768. Other current liabilities	115,147.79
Total	4,183,277.72
Deferred liabilities:	
770. Other deferred liabilities	1,691,984.42
771. Tax liability	2,328,160.38
Total	4,020,144.80
Unadjusted credits:	
773. Insurance and casualty reserves	350,586.20
775. Accrued depreciation, road	76,081.76
776. Accrued depreciation, equipment	8,910,683.30
777. Accrued depreciation, miscellaneous property	14,217.28
778. Other unadjusted credits	1,679,684.42
Total	11,031,252.96
Total liabilities	190,336,043.80
Corporate surplus:	
779. Additions to property through income and surplus	2,305,089.39
Total appropriated surplus	2,305,089.39
784. Profit and loss, debit balance	7,658,581.09
Total corporate deficit	5,353,491.70
Total	184,982,552.10

Auditor's office, Portland, Oregon, April 20, 1928. Requested by Mr. A. C. Spencer, general solicitor.

2722 *Exhibit 89.—Dodds*

2723 *Exhibit 90.—Dodds*

Oregon-Washington Railroad & Navigation Company—estimated operating results for one year's operation of proposed cross-State line

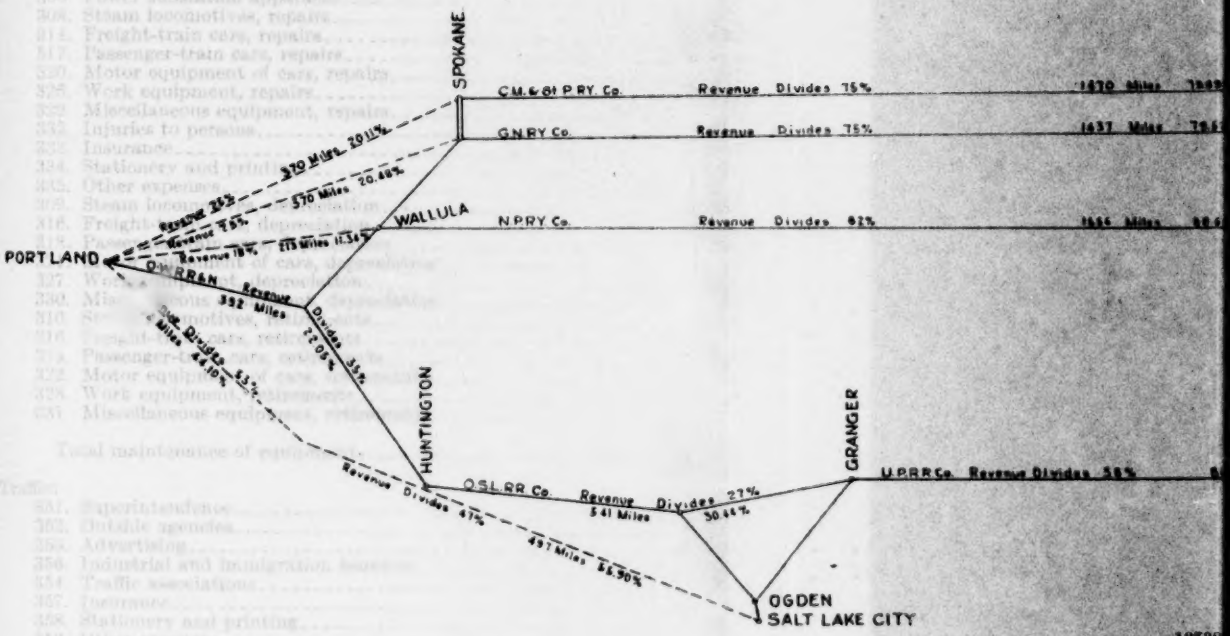
Revenues:	
101. Freight	$199,152
102. Passenger	48,384
106. Mail	11,875
107. Express	6,532
103. Baggage	1,500
Total operating revenues	267,443
Expenses:	
Maintenance of way and structures	197,587
Maintenance of equipment	64,549
Traffic	10,170
Transportation, rail line	107,264
General	22,802
Total operating expenses	402,372
Revenues over expenses	[1] 134,929
Taxes	146,590
Net railway operating income	[1] 281,519
Road and equipment	11,717,677
Rate of return as earned, per cent (red)	2.40
Per cent of return as contemplated under transportation act	5.75
Amount of return as contemplated under transportation act	673,766
Shortage in amount of return as earned	955,285
Shortage in percentage of return	8.15

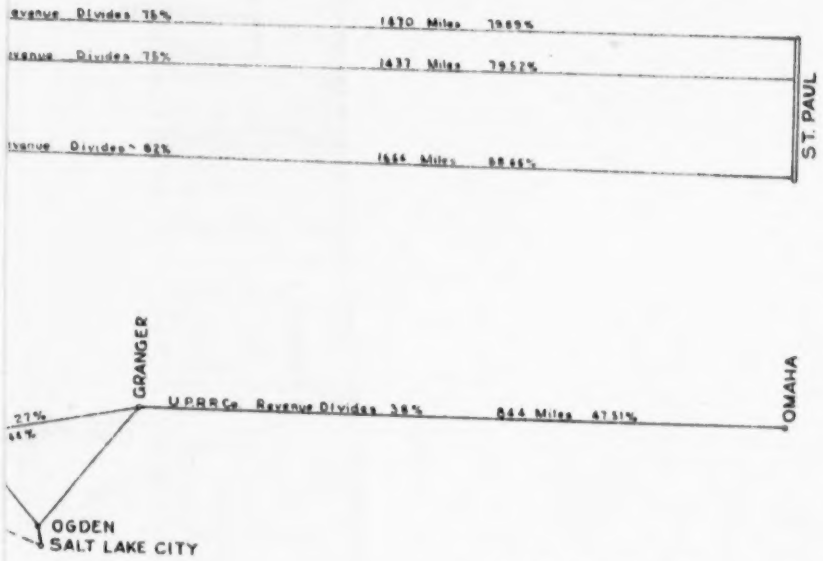
Auditor's office, Portland, Oreg., August 16, 1928.

2724

ACCOUNT	
Maintenance of way and structures:	
201. Superintendence	25,328
202. Roadway maintenance	12,563
220. Track laying and surfacing	44,446
206. Tunnels and subways	2,233
208. Bridges, trestles, and culverts	23,042
212. Ties	69,009
214. Rails	94
216. Other track material	1,029
218. Ballast	
221. Right of way fences	2,370
223. Snow and sand fences and snowsheds	15
225. Crossings and signs	370
227. Station and office buildings	3,865
241. Wharves and docks	
229. Roadway buildings	999
231. Water stations	1,154
233. Fuel stations	179
235. Shops and engine houses	102
253. Power plant buildings	
257. Power transmission systems	
259. Power distribution systems	7
261. Power line poles and fixtures	9
265. Miscellaneous structures	
247. Telegraph and telephone lines	2,398
249. Signals and interlockers	57
272. Removing snow, ice, and sand	424

[1] Deficit.


SPOKANE
C.M.&St P.RY. Co. Revenue Divides 75%
G.N.RY Co. Revenue Divides 75%
370 Miles 29.11%
Revenue 25%
Revenue 5%
570 Miles 20.48%
WALLULA
N.P.RY Co. Revenue Divides 82%
Revenue 18%
275 Miles 17.34%
PORTLAND
O.W.R.&N. Revenue
392 Miles
Divides 35%
22.05%
Revenue Divides 65%
HUNTINGTON
O.S.L.R.R. Co. Revenue Divides 27%
541 Miles
50.66%
GRANGER
U.P.R.R.Co. Revenue Divides 58%
Revenue Divides 42%
497 Miles 56.90%
OGDEN
SALT LAKE CITY



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Maintenance of way and structures—Continued.		
267.	Paving	
273.	Assessments for public improvements	$4
269.	Roadway machines	2,229
271.	Small tools and supplies	4,325
274.	Injuries to persons	9
275.	Insurance	529
276.	Stationery and printing	694
277.	Other expenses	104
278.	Maintaining joint tracks, yards, and other facilities, dr	
279.	Maintaining joint tracks, yards, and other facilities, cr	
	Total maintenance of way and structures	197,587
2725	Maintenance of equipment:	
301.	Superintendence	4,682
302.	Shop machinery	1,608
304.	Power plant machinery	674
306.	Power substation apparatus	34
308.	Steam locomotives, repairs	31,403
314.	Freight-train cars, repairs	10,139
317.	Passenger-train cars, repairs	3,834
320.	Motor equipment of cars, repairs	93
326.	Work equipment, repairs	1,196
329.	Miscellaneous equipment, repairs	24
332.	Injuries to persons	183
333.	Insurance	872
334.	Stationery and printing	224
335.	Other expenses	121
309.	Steam locomotives, depreciation	5,097
316.	Freight-train cars, depreciation	2,613
318.	Passenger-train cars, depreciation	745
321.	Motor equipment of cars, depreciation	19
327.	Work equipment, depreciation	686
330.	Miscellaneous equipment, depreciation	28
310.	Steam locomotives, retirements	106
316.	Freight-train cars, retirements	
319.	Passenger-train cars, retirements	159
322.	Motor equipment of cars, retirements	6
328.	Work equipment, retirements	3
331.	Miscellaneous equipment, retirements	
	Total maintenance of equipment	64,549
Traffic:		
351.	Superintendence	2,651
352.	Outside agencies	4,415
353.	Advertising	1,818
356.	Industrial and immigration bureaus	252
354.	Traffic associations	204
357.	Insurance	4
358.	Stationery and printing	812
359.	Other expenses	14
	Total traffic	10,170
2726	Transportation, rail line:	
371.	Superintendence	4,666
372.	Despatching trains	6,240
373.	Station employes	16,140
374.	Weighing, inspection and demurrage bureaus	437
376.	Station supplies and expenses	939
392.	Train enginemen	17,653
394.	Fuel for train locomotives	22,648
397.	Water for train locomotives	4,396
398.	Lubricants for train locomotives	883
399.	Other supplies for train locomotives	675
400.	Enginehouse expenses, train	3,298

Transportation, rail line—Continued.	
401. Trainmen	$24,791
402. Train supplies and expenses	1,389
404. Signal and interlocker operation	
405. Crossing protection	
407. Telegraph and telephone operation	687
410. Stationery and printing	465
411. Other expenses	5
414. Insurance	295
415. Clearing wrecks	248
416. Damage to property	343
417. Damage to livestock on right of way	236
418. Loss and damage, freight	829
420. Injuries to persons	1
Total transportation, rail line	107,264
General:	
451. Salaries and expenses of general officers	2,024
452. Salaries and expenses of clerks and attendants	12,229
453. General office supplies and expenses	1,018
454. Law expenses	1,758
455. Insurance	17
457. Pensions	951
458. Stationery and printing	554
459. Valuation expenses	1,116
460. Other expenses	3,135
Total general	22,802

2727 *Exhibit 91—Greeley*

ANSWER TO Q.'S 1 AND 2

Cut by species—Oregon and Washington

[Census of manufactures, Department of Commerce]

M bd. ft.	1920	1921	1922	1923	1924	1925	1926
Cedar (Wash.	113,351	120,765	181,226	225,503	195,589	226,664	.....
Cedar (Oreg.	34,482	29,934	61,452	50,012	44,369	53,985	.....
Douglas fir	4,275,017	2,889,543	4,414,104	5,047,712	4,597,213	4,912,204	.....
Hemlock	2,347,368	1,528,190	2,103,586	2,752,495	2,478,583	2,792,432	.....
Larch	495,444	347,940	587,067	775,220	826,710	1,097,425	.....
Western	89,130	49,685	87,000	96,707	115,449	131,561	.....
Yellow pine	66,266	25,648	35,474	40,093	43,174	33,666	.....
Spruce	17,938	9,549	10,469	9,604	14,608	15,163	.....
Hardwoods	278,573	180,560	280,773	330,514	333,209	441,303	.....
Miscellaneous[1]	630,326	310,235	547,386	775,941	740,787	1,000,694	.....
	192,671	151,845	204,665	146,122	164,835	207,927	.....
	165,418	79,446	177,494	214,897	203,526	175,454	.....
	1,741	309	2,121	5,272	5,291	3,180	.....
	9,635	3,733	5,473	5,190	6,356	6,787	.....
	101,446	115,190	130,647	107,220	101,322	104,956	.....
	21,801	11,439	30,908	61,237	62,669	40,307	.....
Total (Wash.)	5,524,509 (584 mills)	3,631,800 (546 mills)	5,836,277 (699 mills)	6,677,656 (630 mills)	6,267,343 (579 mills)	7,027,325 (594 mills)	7,546,239 (482 mills)
Total (Oregon)	3,316,098 (659 mills)	2,022,219 (389 mills)	3,023,768 (496 mills)	3,966,083 (479 mills)	3,665,547 (410 mills)	4,216,383 (416 mills)	4,454,735 (398 mills)

[1] Includes white pine, redwood, white fir, sugar pine, and lodgepole pine.

The 4-L production survey for the year 1927 shows the information given below:

Washington cut (496 mills), 7,094,451,000 bd. ft.

Oregon cut (592 mills), 4,175,786,000 bd. ft.

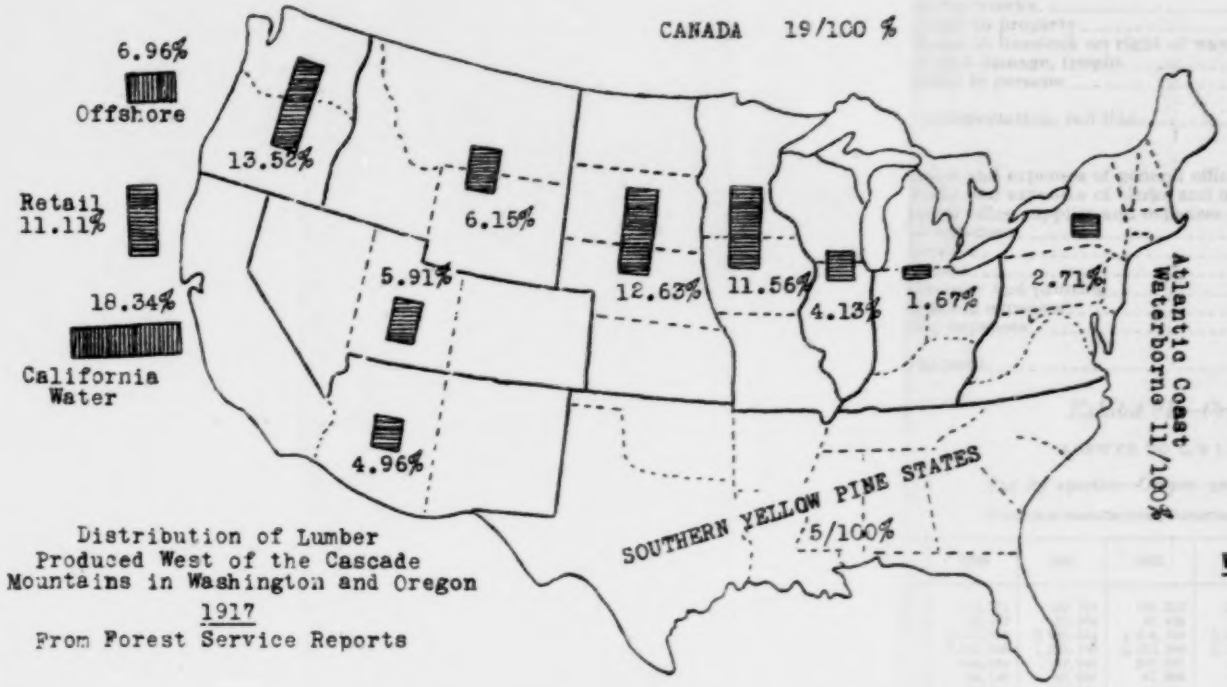
Distribution in Feet
(000 omitted)

RAIL

Ore. & Wash.	811,549
Hetail	666,154
Cal., Ariz. & N.M.	297,965
Utah,Colo., & Nev.	884,394
Ida.,Mont., & Wyo.	368,837
N.D.,S.D., Kan.&Neb.	787,842
Minn.,Ia., & Mo.	699,210
Wis. & Ill.	247,179
Mich.,Ohio, Ind.,Ky.	100,122
Sou.States	2,897
Canada	11,776
Atl.Coast	162,228

WATER

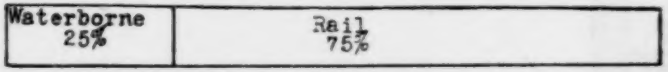
Atl.Coast	6,811
California	1,089,001
Exp. and Offshore	417,468
TOTAL	5,996,870



Distribution of Lumber
Produced West of the Cascade
Mountains in Washington and Oregon
1917
From Forest Service Reports

Distribution in Feet (000 omitted)	
RAIL	
Ore. & Wash.	811,249
Retail	666,164
Cal., Ariz. & N.M.	297,695
Utah, Colo., & Nev.	354,394
Ida., Mont., & Wyo.	368,837
N.D., S.D., Kan. & Neb.	757,842
Minn., Ia., & Mo.	693,210
Wis. & Ill.	247,179
Mich., Ohio, Ind., & Ky.	100,122
Sou. States	2,897
Canada	11,776
Atl. Coast	162,225
WATER	
Atl. Coast	6,811
California	1,099,001
Exp. and Offshore	417,468
TOTAL	5,996,870

Total Distribution 5,996,870,000 Feet or 100%



COMPILED BY WEST COAST LUMBERMEN'S ASSOCIATION, SEATTLE, WASH.

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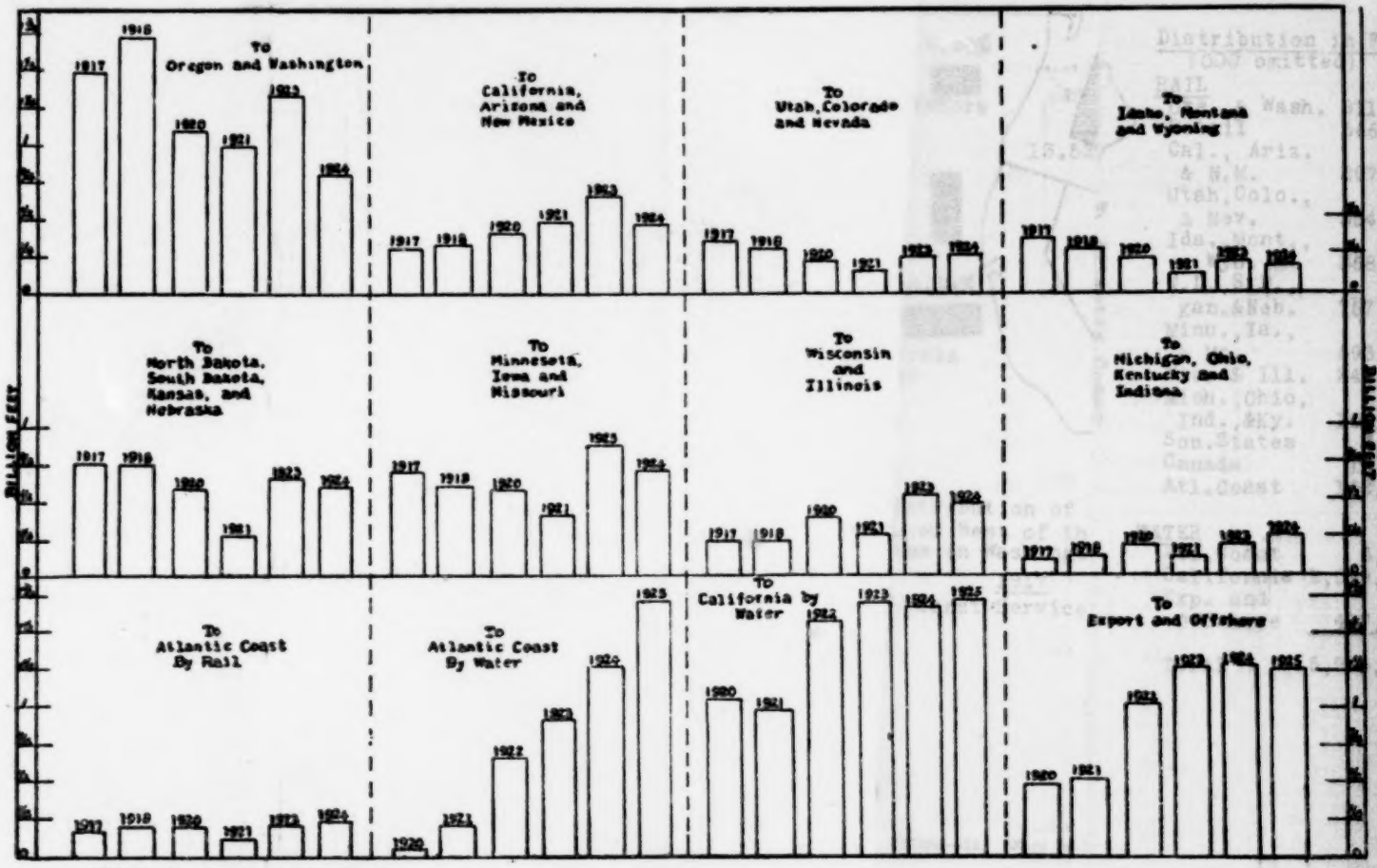
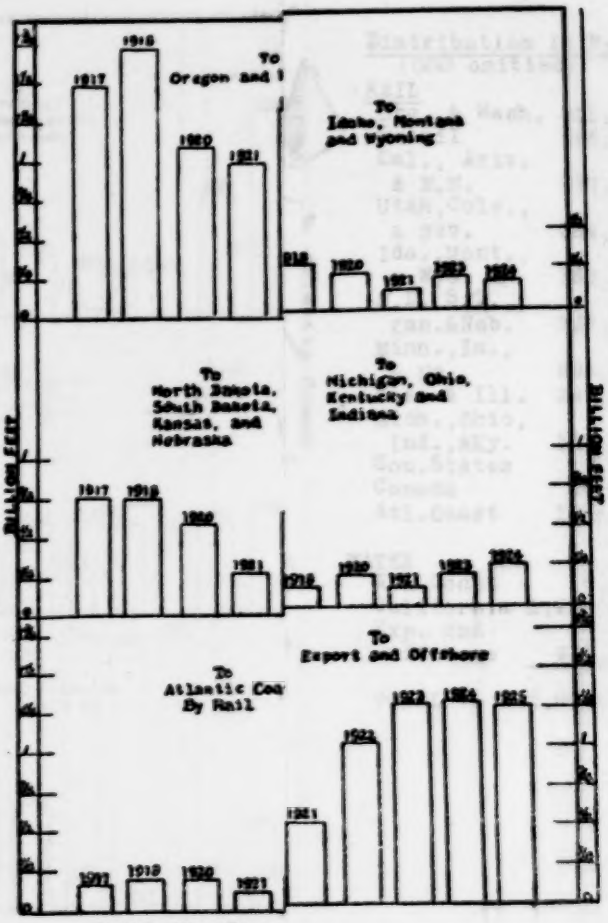


Lumber distribution from Oregon and Washington.



Lumber distribution from Oregon and Washington.

2728 *Exhibit 92—Greeley*

ANSWER TO Q. 3

Oregon and Washington

	1920	1921	1922	1923	1924
	M feet b. m.	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*	*M feet b. m.*
Total lumber produced	7, 578, 925	5, 456, 826	8, 715, 763	9, 396, 940	8, 701, 143
Water-borne shipments	1, 694, 167	1, 774, 523	3, 129, 170	3, 675, 994	3, 959, 130
Per cent water-borne to total produced	22. 35%	32. 52%	35. 90%	39. 95%	45. 50%

	1925[1]	1926[1]	1927[1]
Rail shipments	4, 235, 193	4, 244, 157	4, 352, 103
Water-borne shipments	4, 876, 179	5, 560, 064	5, 568, 599
Total	9, 111, 372	9, 804, 221	9, 920, 702
Per cent water-borne	53. 52%	56. 71%	56. 13%

[1] These are approximate figures calculated from rail distribution shown in West Coast Lumbermen's Association Circular No. 4618, using estimated average loading of 27,000 feet b. m. per car; also water-borne distribution shown on last page of same circular. The relatively smaller percentages of water-borne to total lumber produced, as shown for the years 1920 to 1924, above, are influenced by the inclusion in "Total lumber produced" of lumber sold locally, used in plant and company account, railroad purchases sold f. o. b. mill, and lumber inventories.

2729–2730 *Exhibit 93*

2731 WEST COAST LUMBERMEN'S ASSOCIATION

[Circular No. 4618, Seattle, Washington, April 23, 1928]

Three-year distribution record of West Coast Lumber and shingles

[Following tabulation is an accurate record of lumber and shingle shipments from the Douglas Fir region (West Coast) for the past three calendar years. Figures of rail distribution have been furnished West Coast Lumbermen's Association by the transcontinental railroads; the water shipments by Pacific Lumber Inspection Bureau.]

* Indicates percentage of distribution to each market in relation to entire rail movement

LUMBER—THREE-YEAR RAIL DISTRIBUTION BY STATES

To—	1925		1926		1927	
	Cars	*%	Cars	*%	Cars	*%
Pacific Coast States:						
California	19, 824	12. 64	17, 908	11. 45	15, 891	9. 86
Oregon	1, 036	. 66	1, 089	. 69	11, 268	6. 99
Washington	32, 211	20. 54	28, 362	18. 04	26, 530	16. 46
Sub-total	53, 071	33. 84	47, 449	30. 18	53, 689	33. 31
Inter-Mountain States:						
Arizona	896	. 57	965	. 61	1, 090	. 68
Colorado	4, 489	2. 86	4, 336	2. 76	4, 291	2. 66
Idaho	1, 900	1. 21	2, 698	1. 72	2, 013	1. 25
Montana	2, 052	1. 31	1, 964	1. 25	1, 737	1. 08
Nevada	762	. 49	787	. 50	720	. 45
New Mexico	939	. 60	1, 159	. 74	451	. 28
Utah	3, 308	2. 11	2, 760	1. 76	2, 850	1. 77
Wyoming	1, 589	1. 01	1, 598	1. 02	1, 622	1. 00
Sub-total	15, 935	10. 16	16, 267	10. 36	14, 773	9. 17

Three-year distribution record of West Coast Lumber and shingles—Continued

LUMBER—THREE-YEAR RAIL DISTRIBUTION BY STATES—Continued

To—	1925		1926		1927	
	Cars	*%	Cars	*%	Cars	*%
Middle Western States:						
Illinois	15,063	9.60	15,968	10.16	14,242	8.84
Iowa	7,343	4.68	7,178	4.57	7,398	4.59
Kansas	5,264	3.36	5,386	3.43	4,764	2.96
Minnesota	11,769	7.50	10,294	6.55	9,666	6.00
Missouri	3,973	2.53	3,655	2.32	4,245	2.63
Nebraska	5,964	3.80	5,714	3.63	5,805	3.60
North Dakota	3,614	2.30	3,083	1.96	3,072	1.90
South Dakota	4,481	2.86	3,504	2.23	3,514	2.18
Wisconsin	5,346	3.41	5,411	3.44	6,084	3.77
Sub-total	62,817	40.04	60,193	38.29	58,790	36.47
Southwestern States:						
Arkansas	117	.08	120	.08	185	.12
Louisiana	16	.01	24	.02	150	.09
Oklahoma	822	.52	3,316	2.11	3,609	2.24
Texas	1,107	.71	4,866	3.10	4,757	2.95
Sub-total	2,062	1.32	8,326	5.31	8,701	5.40
Central Freight Association States:						
Indiana	3,058	1.95	3,995	2.54	2,886	1.79
Michigan	3,985	2.54	4,989	3.17	3,630	2.25
Ohio	3,058	1.95	3,995	2.54	3,908	2.43
Sub-total	10,101	6.44	12,979	8.25	10,424	6.47
Eastern States:						
Delaware	21	.01	22	.01	33	.02
District of Columbia	85	.05	173	.11	42	.03
Maryland	212	.14	173	.11	417	.26
New Jersey	1,041	.66	1,080	.69	1,709	1.06
New York	2,973	1.90	2,635	1.68	3,779	2.34
Pennsylvania	2,230	1.42	2,030	1.29	2,503	1.55
Virginia	319	.20	432	.27	379	.23
West Virginia	573	.37	454	.29	606	.38
Sub-total	7,454	4.75	6,999	4.45	9,468	5.87
New England States:						
Connecticut	2,973	1.90	2,635	1.68	859	.53
Maine	64	.04	108	.07	189	.12
Massachusetts	1,317	.84	1,080	.69	1,721	1.07
New Hampshire	127	.08	151	.10	169	.10
Rhode Island	170	.11	173	.11	242	.15
Vermont	382	.24	302	.19	131	.08
Sub-total	5,033	3.21	4,449	2.84	3,311	2.05
Southeastern States:						
Alabama	21	.01	22	.01	174	.11
Florida	64	.04	65	.04	60	.04
Georgia	21	.01	22	.01	170	.10
Kentucky	106	.07	151	.10	372	.23
Mississippi	21	.01	22	.01	50	.03
North Carolina	64	.04	65	.04	221	.14
South Carolina	21	.01	22	.01	41	.02
Tennessee	43	.03	108	.07	581	.36
Sub-total	361	.22	477	.29	1,669	1.03
Foreign:						
Canada	24	.02	51	.03	149	.09
Mexico	1		1		215	.14
Sub-total	25	.02	52	.03	364	.23
Grand total	156,859	100.00	157,191	100.00	161,189	100.00

Three-year distribution record of West Coast Lumber and shingles—Continued

2733 SHINGLES—THREE-YEAR RAIL DISTRIBUTION BY STATES

To—	1925		1926		1927	
	Cars	*%	Cars	*%	Cars	*%
Pacific Coast States:						
California	421	1.63	401	1.54	593	2.49
Oregon	129	.50	201	.77	529	2.23
Washington	1,494	5.77	1,633	6.28	1,434	6.03
Sub-total	2,044	7.90	2,235	8.59	2,556	10.75
Inter-Mountain States:						
Arizona	24	.09	31	.12	43	.18
Colorado	514	1.99	464	1.79	449	1.89
Idaho	219	.85	254	.98	254	1.07
Montana	196	.76	184	.71	194	.82
Nevada	14	.05	17	.07	31	.13
New Mexico	47	.18	42	.16	33	.14
Utah	237	.92	287	1.10	232	.97
Wyoming	84	.32	99	.38	88	.37
Sub-total	1,335	5.16	1,378	5.31	1,324	5.57
Middle Western States:						
Illinois	1,193	4.61	1,013	3.90	1,198	5.04
Iowa	1,361	5.26	1,357	5.22	1,043	4.38
Kansas	1,253	4.84	1,326	5.10	1,097	4.61
Minnesota	3,140	12.13	3,308	12.73	2,287	9.62
Missouri	1,547	5.98	1,208	4.99	1,616	6.79
Nebraska	1,455	5.62	1,185	4.56	1,013	4.26
North Dakota	344	1.33	341	1.31	306	1.29
South Dakota	853	3.30	561	2.16	406	1.71
Wisconsin	948	3.66	1,102	4.24	834	3.51
Sub-total	12,094	46.73	11,491	44.21	9,800	41.21
Southwestern States:						
Arkansas	331	1.28	393	1.51	420	1.77
Louisiana	123	.47	96	.37	96	.40
Oklahoma	1,381	5.34	1,414	5.44	1,329	5.59
Texas	1,381	5.34	2,434	9.37	2,339	9.83
Sub-total	3,216	12.43	4,337	16.69	4,184	17.59
Central Freight Ass'n States:						
Indiana	578	2.23	632	2.43	543	2.28
Michigan	1,650	6.38	1,604	6.17	1,110	4.67
Ohio	904	3.49	772	2.97	663	2.79
Sub-total	3,132	12.10	3,008	11.57	2,316	9.74
Eastern States:						
Delaware	28	.11	13	.05	19	.08
Dist. of Columbia	11	.04	2	.01	6	.03
Maryland	215	.83	143	.55	81	.34
New Jersey	572	2.21	530	2.04	424	1.78
New York	1,350	5.22	1,103	4.24	1,134	4.77
Pennsylvania	343	1.33	385	1.48	385	1.62
Virginia	38	.15	35	.13	38	.16
West Virginia	27	.10	29	.11	11	.04
Sub-total	2,584	9.99	2,240	8.61	2,098	8.82
2734 New England States:						
Connecticut	287	1.11	264	1.02	254	1.07
Maine	17	.06	19	.07	35	.15
Massachusetts	264	1.02	289	1.11	248	1.04
New Hampshire	19	.07	12	.05	12	.05
Rhode Island	23	.09	29	.11	14	.06
Vermont	46	.18	53	.20	31	.13
Sub-total	656	2.53	666	2.56	594	2.50

Three-year distribution record of West Coast Lumber and shingles—Continued

SHINGLES—THREE-YEAR RAIL DISTRIBUTION BY STATES—Continued

To—	1925		1926		1927	
	Cars	*%	Cars	*%	Cars	*%
Southeastern States:						
Alabama	88	0.34	61	0.24	117	0.49
Florida	11	.04	7	.03	5	.02
Georgia	59	.23	31	.12	111	.47
Kentucky	283	1.09	207	.80	204	.86
Mississippi	47	.18	85	.33	107	.45
North Carolina	204	.79	161	.62	151	.63
South Carolina	38	.15	16	.06	66	.28
Tennessee	88	.34	68	.26	137	.58
Sub-total	818	3.16	636	2.46	898	3.79
Foreign:						
Canada					11	.04
Mexico						
Sub-total					11	.04
Grand total	25,879	100.00	25,991	100.00	23,781	100.00

2735 LUMBER—THREE-YEAR WATERBORNE DISTRIBUTION

	1925	1926	1927
Domestic:	*Lumber-feet*	*Lumber-feet*	*Lumber-feet*
Alaska	3,465,055	6,660,535	11,655,155
Hawaiian Islands	76,379,512	67,031,053	74,006,409
Pan. Canal Zone	9,517,006	9,775,630	10,251,887
Philippine Islands	6,126,366	6,335,239	5,405,200
Unclassified	4,290,832	322,867	1,560,742
Sub-total	99,778,771	90,125,324	102,879,513
California	1,707,065,836	1,686,746,930	1,551,620,304
Atlantic Coast	1,701,342,798	1,988,911,739	1,919,668,928
Eastern Canada			51,717,329
Total domestic	3,508,187,405	3,765,783,993	3,625,886,074
Export:			
Australia	241,665,431	277,124,966	351,549,744
Africa (South)	18,537,654	30,285,241	26,180,325
Central America	1,129,194	132,159	2,411,450
China	163,437,331	205,557,479	158,846,674
Egypt	20,150,566	8,472,023	2,649,559
India	6,946,422	8,460,968	7,850,791
Japan	583,385,273	903,092,945	933,033,227
Mexico	15,552,664	18,932,486	22,942,036
New Zealand	25,687,462	26,560,720	21,048,789
So. America (E. Coast)	94,160,025	50,763,605	69,927,965
So. America (W. Coast)	29,617,780	125,996,904	129,535,731
So. Sea Islands	5,127,877	7,323,766	5,007,583
U. K. and Continent	140,748,504	99,215,877	180,848,894
West Indies	17,573,362	31,335,608	30,725,746
Unclassified	4,272,579	1,025,356	74,602
Total export	1,367,992,124	1,794,280,103	1,942,713,116
Grand total	4,876,179,529	5,560,064,096	5,568,599,190
Originating district:			
British Columbia	577,560,288	712,743,256	740,200,330
Washington	3,055,698,341	3,552,929,599	3,605,962,606
Oregon	1,242,920,900	1,294,391,241	1,222,436,254
Total	4,876,179,529	5,560,064,096	5,568,599,190

Exhibit 104

Statement showing estimated tonnages and revenues—ten southwestern Idaho counties—movement via proposed cross-State line in Oregon

WESTBOUND TRAFFIC, FIRST YEAR

Total dist. miles	From—	To—	Commodity	Total no. of cars	Total no. of tons [1]	Rate		Rate per ton-mile (cents)	Dist. hauled over X-St. l. (miles)	From—	To—	% X-State line mileage to total mileage hauled	Revenue to X-St. line mileage prorate
						Per car	Per 100 lbs.						
875.7	Boise	S. F.	Grain	156	7,020		$.56½	1.17620	189	Crane	Cr. Lake	21.58273	$15,603.63
1,254.7	"	L. A.	"	157	7,065		.56½	.82091	189	"	" "	15.06336	10,959.09
										Average rate in cents per T.-M.			26,562.72
													.99782
875.7	"	S. F.	Hay	23	345		.70½	1.61014	189	Crane	Cr. Lake	21.58273	1,049.76
1,254.7	"	L. A.	"	24	360		.70½	1.12377	189	"	" "	15.06336	764.45
										Average rate in cents per T.-M.			1,814.21
													1.36156
875.7	"	S. F.	Apples	245	3,675		.98	2.23821	189	Crane	Cr. Lake	21.58273	15,544.07
1,254.7	"	L. A.	"	245	3,675		.98	1.56213	189	"	" "	15.06336	10,847.72
										Average rate in cents per T.-M.			26,391.79
													1.89985
875.7	"	S. F.	Potatoes	49	882		.63	1.43885	189	Crane	Cr. Lake	21.58273	2,398.23
1,254.7	"	L. A.	"	49	882		.63	1.00422	189	"	" "	15.06336	1,673.65
										Average rate in cents per T.-M.			4,071.88
													1.22133
875.7	"	S. F.	Vegetables	90	1,350		.75	1.71292	189	Crane	Cr. Lake	21.58273	4,369.95
1,254.7	"	L. A.	"	90	1,350		.75	1.19550	189	"	" "	15.06336	3,049.65
										Average rate in cents per T.-M.			7,419.60
													1.45397
875.7	"	S. F.	Cattle	325	4,225	$206.00		1.80998	189	Crane	Cr. Lake	21.58273	14,447.81
1,254.7	"	L. A.	"	325	4,225	206.00		1.26325	189	"	" "	15.06336	10,082.67
										Average rate in cents per T.-M.			24,530.48
													1.53599
875.7	"	S. F.	Hogs	120	1,320	271.50		2.81832	189	Crane	Cr. Lake	21.58273	7,030.76
1,254.7	"	L. A.	"	120	1,320	271.50		1.96700	189	"	" "	15.06336	4,906.55
										Average rate in cents per T.-M.			11,937.31
													2.39244

See footnote at end of table.

Statement showing estimated tonnages and revenues—ten southwestern Idaho counties—movement via proposed cross-State line in Oregon—Con.

WESTBOUND TRAFFIC, FIRST YEAR—Continued

Total dist. miles	From—	To—	Commodity	Total no. of cars	Total no. of tons [1]	Rate		Rate per ton-mile (cents)	Dist. hauled over X-St. l. (miles)	From—	To—	% X-State line mileage to total mileage hauled	Revenue to X-St. line mileage prorate
						Per car	Per 100 lbs.						
875.7	Boise	S. F.	Horses & mules	32	448	$240.00		1.96729	189	Crane	Cr. Lake	21.58273	$1,657.34
1,254.7	"	L. A.	" " "	33	462	240.00		1.36606	189	"	" "	15.06336	1,192.75
													2,850.09
										Average rate in cents per T.-M.			1.65713
875.7	"	S. F.	Sheep	300	3,300	204.50		2.12287	189	Crane	Cr. Lake	21.58273	13,239.33
1,254.7	"	L. A.	"	300	3,300	204.50		1.48163	189	"	" "	15.06336	9,239.31
													22,478.64
										Average rate in cents per T.-M.			1.80204
875.7	"	S. F.	Eggs	52	676		$1.64	3.74557	189	Crane	Cr. Lake	21.58273	4,784.89
1,254.7	"	L. A.	"	52	676		1.64	2.61417	189	"	" "	15.06336	3,339.22
													8,124.11
										Average rate in cents per T.-M.			3.17934
875.7	"	S. F.	Poultry	33	462		1.64	3.74557	189	Crane	Cr. Lake	21.58273	3,270.15
1,254.7	"	L. A.	"	34	476		1.64	2.61417	189	"	" "	15.06336	2,351.29
													5,621.44
										Average rate in cents per T.-M.			3.17090
875.7	"	S. F.	Butter	87	1,392		1.64	3.74557	189	Crane	Cr. Lake	21.58273	9,852.91
1,254.7	"	L. A.	"	87	1,392		1.64	2.61417	189	"	" "	15.06336	6,876.03
													16,728.94
										Average rate in cents per T.-M.			3.17934
			Totals	3,028	50,278								158,531.21

[1] Tons @ average O. S. L., 1926 report, public service commission.

Statement showing estimated tonnages and revenues—ten southwestern Idaho counties—movement via proposed cross-State line in Oregon—Continued

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WESTBOUND TRAFFIC, FIFTH YEAR

	Commodity	Total No. of cars	Total No. of tons[1]	Distance hauled over X-State L. (miles)	Crane to Crescent Lake	Revenue to X-State line (mileage pro-rate)	Average rate in cents per ton-mile (X-State line)
Boise to S. F. & L. A.	Grain	357	16,058	189	"	$30,283.46	0.99782
"	Hay	55	825	189	"	2,123.01	1.36156
"	Apples	490	7,350	189	"	26,391.77	1.89985
"	Potatoes	181	3,258	189	"	7,520.49	1.22133
"	Vegetables	199	2,985	189	"	8,202.79	1.45397
"	Cattle	766	9,958	189	"	28,908.28	1.53599
"	Hogs	280	3,080	189	"	13,926.87	2.39224
"	Horses & mules	75	1,050	189	"	3,288.57	1.65713
"	Sheep	700	7,700	189	"	26,225.09	1.80204
"	Eggs	171	2,223	189	"	13,357.90	3.17934
"	Poultry	109	1,526	189	"	9,145.32	3.17090
"	Butter	269	4,304	189	"	25,862.53	3.17934
Total		3,652	60,317			195,236.08	

RECAPITULATION

1st year		3,028	50,278			$158,531.21	
2nd year		[2] 3,340	[2] 55,298			[2] 176,883.65	
3rd year		[2] 3,340	[2] 55,298			[2] 176,883.65	
4th year		[2] 3,340	[2] 55,298			[2] 176,883.65	
5th year		3,652	60,317			195,236.08	
Total		16,700	276,489			884,418.24	

[1] Average of traffic originated O. S. L. system as per report to P. S. C. Or.
[2] Average of 1st and 5th years.

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Exhibit 105

Recapitulation—Estimated tonnage and revenues—Cross-State line traffic groups—by years

GROUP I. OREGON TRAFFIC CREATED—EX. #28

Year	Cars	Tons	Revenues
1st year (east & westbound)	6,143	100,101	$284,328.55
2nd " " "	7,073	116,381	318,606.11
3rd " " "	8,002	132,659	352,882.66
4th " " "	7,914	131,960	365,806.62
5th " " "	8,798	146,930	402,702.73
Total	37,930	628,031	1,724,327.67

GROUP II. SAN FRANCISCO AND VICINITY TO OREGON POINTS EAST OF CRANE

1st year	75	1,350	$6,302.21
2nd "	85	1,530	7,142.50
3rd "	94	1,692	7,898.76
4th "	104	1,872	8,739.06
5th "	113	2,034	9,495.32
Total	471	8,478	39,577.85

GROUP III. ALKALI LAKE, OUTBOUND

1st year	500	15,000	$14,850.00
2nd "	563	16,890	16,721.10
3rd "	625	18,750	18,562.50
4th "	688	20,640	20,433.60
5th "	750	22,500	22,275.00
Total	3,126	93,780	92,842.20

GROUP IV. ALKALI LAKE, INBOUND

1st year	265	8,750	$14,005.40
2nd "	112	3,024	6,184.08
3rd "	125	3,378	6,905.46
4th "	137	3,702	7,568.04
5th "	151	4,074	8,333.88
Total	790	22,928	42,996.86

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GROUP V. *INBOUND TONNAGE TO CROSS, STATE LINE

1st year	458	3,916	$16,770.50
2nd "	505	4,320	18,501.00
3rd "	602	5,144	22,030.00
4th "	684	5,845	25,032.00
5th "	806	6,890	29,508.00
Total	3,055	26,115	111,841.50

GROUP VI. IDAHO TRAFFIC, WESTBOUND

1st year	3,028	50,278	$158,531.21
2nd "	3,340	55,298	176,883.65
3rd "	3,340	55,298	176,883.65
4th "	3,340	55,298	176,883.65
5th "	3,652	60,317	195,236.08
Total	16,700	276,489	884,418.24

GROUP VII. IDAHO TRAFFIC, EASTBOUND

1st year	870	16,080	$65,745.47
2nd "	980	18,108	74,047.25
3rd "	1,088	20,112	82,219.31
4th "	1,198	22,140	90,521.10
5th "	1,306	24,132	98,683.06
Total	5,442	100,572	411,216.19

Exhibit 106.—Wiggins

Estimated tonnages and revenues—cross-State line on basis Oregon traffic now moving via Roseville, California and Ogden, Utah, being diverted to cross-State line—first, second, third, fourth, and fifth years

(1) Destination, State, territory or country	(2) Cars	(3) Tons	(4) Rate in ¢ per 100 lbs.	(5) Rate P. ton	(6) Rate P. T. M. (mils)	(7) Dist. via tariff route	(8) Total T-mi.	(9) Total revenue	(10) % of X-State to total mileage	(11) Revenue to X-St. L. (mileage, prorate)
Arkansas	44	1,356	77½	$15.50	5.26	2,949	3,998,844	$21,018.00	6.41	$1,347.25
Colorado	924	31,576	51	10.20	5.73	1,783	56,300,008	322,075.20	10.60	34,139.97
Connecticut	70	2,082	90	18.00	4.98	3,617	7,530,594	37,476.00	5.23	1,959.99
Delaware	6	184	90	18.00	5.13	3,512	646,208	3,312.00	5.38	178.19
Dist. of Columbia	22	646	90	18.00	5.21	3,452	2,229,992	11,628.60	5.48	637.21
Florida	14	486	100	20.00	5.47	3,659	1,778,274	9,720.00	5.17	502.52
Idaho	2	100	45	9.00	14.59	617	61,700	900.00	30.63	275.67
Illinois	4,948	163,664	72	14.40	5.39	2,672	437,310,208	2,356,761.60	7.07	166,623.05
Indiana	574	19,572	84½	16.90	5.90	2,866	56,093,352	330,766.80	6.59	21,797.53
Iowa	2,712	86,294	68	13.60	5.84	2,329	200,978,726	1,173,598.40	8.12	95,296.19
Kansas	906	31,970	62½	12.50	5.16	2,424	77,495,280	399,625.00	7.80	31,170.75
Kentucky	54	1,922	85	17.00	5.71	2,977	5,721,794	32,674.00	6.35	2,074.80
Louisiana	6	176	87	17.40	5.83	2,983	525,008	3,062.40	6.34	194.16
Maine	30	1,066	90	18.00	4.67	3,854	4,108,364	19,188.00	4.90	940.21
Maryland	42	1,112	90	18.00	5.18	3,475	3,864,200	20,016.00	5.44	88.87
Massachusetts	196	6,186	90	18.00	4.88	3,690	22,826,340	111,348.00	5.12	5,701.02
Michigan	876	26,486	85	17.00	5.81	2,924	77,445,064	450,282.00	6.46	29,086.93
Minnesota	232	7,808	62½	12.50	4.88	2,562	20,004,096	97,600.00	7.38	7,202.88
Mississippi	4	116	85	17.00	5.45	3,119	361,804	1,972.00	6.06	119.50
Missouri	1,070	34,034	72	14.40	5.33	2,703	91,993,902	490,089.60	6.99	34,257.26
Nebraska	816	28,142	62½	12.50	5.72	2,184	61,462,128	351,775.00	8.65	30,428.54
New Hampshire	34	1,030	90	18.00	4.83	3,725	3,836,750	18,540.00	5.07	939.98
New Jersey	120	3,398	90	18.00	5.07	3,549	12,059,502	61,164.00	5.33	3,260.04
New York	428	12,755	90	18.00	4.95	3,633	46,219,026	228,996.00	5.20	11,907.79
North Carolina	14	444	1.00	20.00	5.31	3,763	1,670,772	8,880.00	5.02	445.78
North Dakota	2	60	54	10.80	6.47	1,670	100,200	648.00	11.32	73.35
Ohio	714	22,926	87	17.40	5.83	2,987	68,479,962	398,912.40	6.33	25,251.15
Oklahoma	708	24,622	70	14.00	5.19	2,700	66,479,400	344,708.00	7.00	24,129.56
Pennsylvania	416	12,184	90	18.00	5.69	3,164	38,550,176	219,312.00	5.97	13,092.93
Rhode Island	34	962	90	18.00	4.88	3,689	3,548,818	17,316.00	5.12	886.58
South Dakota	4	112	54	10.80	6.44	1,676	187,712	1,209.60	11.28	136.44
Tennessee	24	646	77½	15.50	5.33	2,908	1,878,568	10,013.00	6.50	650.85
Texas	310	10,466	77½	15.50	5.91	2,621	27,431,386	162,223.00	7.21	11,696.28
Utah	1,362	50,068	47½	9.50	7.72	1,230	61,583,640	475,646.00	15.37	73,106.79
Vermont	00	1,358	90	18.00	4.75	3,789	3,145,462	24,444.00	4.99	1,219.76

Estimated tonnages and revenues—cross-State line on basis Oregon traffic now moving via Roseville, California and Ogden, Utah, being diverted to cross-State line—first, second, third, fourth, and fifth years—Continued

(1) Destination, State, territory or country	(2) Cars	(3) Tons	(4) Rate in ¢ per 100 lbs.	(5) Rate P. ton	(6) Rate P. T. M. (mils)	(7) Dist. via tariff route	(8) Total T-mi.	(9) Total revenue	(10) % of X-State to total mileage	(11) Revenue to X-St. L. (mileage, prorate)
2742 Virginia	52	1,532	90	18.00	4.97	3,621	5,547,372	27,576.00	5.22	1,439.47
West Virginia	62	1,880	88½	17.70	5.36	3,300	6,204,000	33,276.00	5.73	1,906.71
Wisconsin	1,938	56,624	68	13.60	6.56	2,073	117,381,552	770,086.40	9.12	70,231.88
Wyoming	126	4,386	51	10.20	6.05	1,687	7,399,182	2,285.20	11.20	143.94
Mexico, Gulf coast	4	130	77½	15.50	5.20	2,983	387,790	2,015.00	6.34	127.75
Europe via Atlantic ports	48	880	90	18.00	4.95	3,633	3,197,040	15,840.00	5.20	823.68
Canada, east of Winnipeg	42	1,098	90	18.00	5.11	3,520	3,864,960	19,764.00	5.37	1,061.33
Subtotal	20,030	652,506	3,302	660.40	238.69	122,272	1,613,889,156	9,086,722.60	312.06	706,554.53
S. P. Co. short line connections in Oregon, eastbound	2,430	72,320	78.62 avge.	15.72 avge.	5.64 avge. 5.68	2,911 mi. 2,911	210,523,520	1,195,773.59	6.49	100,476.06
Commodity Group 1-16, eastbound	2,320	35,080			14.22	2,911	102,117,880	1,453,538.25	6.49	94,334.63
" " 17-28 "	6	78			14.22	2,911	227,058	3,228.76	6.49	209.55
" " 29-39 "	8	220			14.22	2,911	640,420	9,106.77	6.49	591.03
" " 45-69 "	1,198	33,764			14.22	2,911	98,287,004	1,397,641.20	6.49	90,706.91
Subtotal	3,532	69,142					201,272,362	2,863,514.96		185,842.12
All commodities, westbound	1,226	20,452			14.22	2,911	59,535,772	846,598.68	6.49	54,944.25
Lumber, Bend to East	3,410	102,300			5.41	2,847	291,248,100	1,575,420.00	5.92	93,264.86
Total, 1st year	30,628	916,720					2,376,468,910	15,568,029.85		1,147,081.82

NOTE.—Column 11 shows revenues on straight mileage prorate. For revenues claimed for cross-State line see Exhibit #16.

2743 *Exhibit No. 107—Witness J. P. Newell*

Before the Interstate Commerce Commission

PUBLIC SERVICE COMMISSION OF OREGON

vs.

CENTRAL PACIFIC RAILWAY

No. 19680

Supplement to Exhibit 16—Additional potential earnings of cross-State line

2744 ADDITIONAL POTENTIAL EARNINGS OF CROSS-STATE LINE

Mention is made on page 140 of Exhibit 16 of traffic other than that shown therein, the evidence of which could not be collected in time for inclusion for that exhibit. For part of it, it was necessary to await the testimony given by the witnesses before the commission. This exhibit presents data contained in statements of various witnesses as to the amount of such traffic with calculations of moving it, estimates of the resulting earnings and revisions of tables of net earnings and return given in Exhibit 16.

The additions consist of:

Traffic from San Francisco and vicinity to Oregon points east of Crane.
Outbound from Alkali Lake.
Inbound to Alkali Lake.
Inbound to points of cross-State line.
Westbound from Idaho.
Eastbound to Idaho.

In calculating the cost of haul the allowance for empty car movement has been, as with the traffic originated in Oregon, 60% to eastbound and 30% to westbound. Most of this tonnage is of commodities taking relatively high rates and much of it is short-haul. The net earnings from it, therefore, make a substantial addition to the revenues of the cross-State line, but I think not unduly large, since a
2745 considerable part will be originated by that line, and the growth of the remainder will be stimulated by the use of the shorter route.

San Francisco and Vicinity to Oregon Points East of Crane

Testimony was given by Mr. S. L. Newton, of Idaho, in Exhibit 5, as to certain commodities inbound to points on existing lines in eastern Oregon. All of this will move from Crescent Lake to Crane when the cross-State line is built. Comparison of summaries of Mr. Newton's estimates of car-mile and ton-mile earnings show an average of 18 net tons per car. The cost per car would be $25.25, which for the 75 cars of the first year would amount to $1,894. Mr. Wiggins' Exhibit 105, shows gross earnings of $6,302. The net earnings on this traffic would have been $4,408.

For the fifth year the cost for 113 cars would be $2,853, gross earnings, (Exhibit 105), $9,495 and net $6,642.

The other years are interpolated on the basis of a uniform increase as follows:

Second year, $4,966.
Third " 5,525.
Fourth " 6,084.

Alkali Lake outbound

Mr. H. L. Emerson testified that on completion of the cross-State line a plant would be promptly established at Alkali Lake and that operations would begin on the basis of a minimum of 50 tons per day. Mr. Wiggins has estimated this as 500 cars for the first year, increasing uniformly to 750 cars in the fifth year. See Exhibit 105.

2746 The junction point of the spur to Alkali Lake has been taken as 100 miles from Crescent Lake, and the spur is estimated as 20 miles long. It is assumed that the shipper will deliver traffic to the main line at his own expense, hence cost and revenue are figured from the junction, called Wagontire.

The cost from Wagontire to Crescent Lake is estimated at $12.70 per car. For 500 cars this makes $6,350 for the first year. The gross earnings, Exhibit 105, would be $14,850 and the net, $8,500.

For the fifth year, 750 cars, cost $9,525, gross earnings $22,275, net, $12,750.

Second year, net earnings, $9,562.
Third " " " 10,625.
Fifth " " " 11,688.

Alkali Lake inbound

Mr. Wiggins' Exhibit 105, has estimated construction materials for the first year together with fuel and other supplies proportional to output for each year. The first year's estimate is 265 cars of 33 tons each. The cost of haul at $14.30 per car would be $3,790; gross earnings, Exhibit 105, $14,005; net $10,215.

For the second year, with fuel and supplies only to haul in, the number of cars is estimated at 112, which would cost $1,602; gross earnings $6,184; net $4,582.

For the fifth year, 151 cars, cost $2,159; gross earnings $8,334; net $6,175.

Third year, net earnings, $5,113.
Fifth " " " 5,644.

2747 Inbound to points on cross-State line

Mr. Lounsbury's Exhibit 74, showing probable tonnage to points on cross-State line, in Docket 14392, covered 1,580 tons of merchandise, which I have estimated at 4½ tons per car, making 352 cars; and 2,336 tons of other freight, estimated, on the basis of average loading of each commodity at 22 tons per car, making 106 cars. According to the distribution shown by Mr. Lounsbury, and the

estimated loading as above, there were 352 cars, with loads of 4.5 tons each, to move east an average distance of 78 miles, 40 cars, of 22 tons each moving east 89 miles, and 66 cars, of 22 tons each, moving west 45 miles.

I calculate the cost of the 352 cars east at $9.80 each, total $3,450; of the 40 cars east at $12.10, total $484; and of the 66 cars west at $5.50, total $363.

The earnings attributed to the cross-State line by Mr. Lounsbury are a much larger proportion of the total than they would be on the mileage basis which Mr. Wiggins has used. I therefore in this case add terminal expenses to the road-haul costs, adding $9.60 per car for delivery of 458 cars, total $4,397; and $4.80 for interchange of 392 cars, total $1,882. This is a total cost of $10,576. Mr. Lounsbury's estimate of earnings is $16,771. The net would therefore be $6,195.

Mr. Lounsbury's estimates for the succeeding years are not on the basis of uniform increase, nor does he give earnings separately from the cross-State line for each year. I take both cost and earnings as proportional to his estimated tonnage for each year and obtain the following:

First year,	3,916	tons,	cost	$10,576,	earnings	$16,771,	net	$6,195.
Second "	4,320	"	"	11,667	"	18,501	"	6,834.
Third "	5,144	"	"	13,892	"	22,030	"	8,138.
Fourth "	5,845	"	"	15,786	"	25,032	"	9,246.
Fifth "	6,890	"	"	18,608	"	29,508	"	10,900.

2748 Traffic from ten southwestern counties of Idaho, westbound

Mr. Newton's [Spangleri] Exhibit 23, shows cars of various commodities as shown below for the first and fifth years:

Crane to Crescent Lake

FIRST YEAR

Cars	Commodity	Tons per car	Cost per car	Total cost
313	Grain	45	$26.04	$8,150
47	Hay	15	22.10	1,039
490	Apples	15	34.12	16,719
98	Potatoes	18	34.52	3,383
180	Vegetables	15	34.12	6,142
650	Cattle	13	21.70	14,105
240	Hogs	11	21.45	5,148
65	Horses and mules	14	20.95	1,362
600	Sheep	11	21.45	12,870
104	Eggs	13	33.87	3,522
67	Poultry	14	34.00	2,278
174	Butter	16	34.25	5,960
3,028	Total direct cost			80,678
	Gross earnings, from Mr. Wiggins' Exhibit (105)			158,531
	Net earnings			77,853

Crane to Cresent Lake—Continued

2749 FIFTH YEAR

Cars	Commodity	Tons per car	Cost per car	Total cost
357	Grain	45	$28.04	$9,206
55	Hay	15	22.10	1,216
490	Apples	15	34.12	16,719
181	Potatoes	18	34.52	6,246
199	Vegetables	15	34.12	6,790
766	Cattle	13	21.70	16,622
280	Hogs	11	21.45	6,006
75	Horses and mules	14	20.95	1,571
700	Sheep	11	21.45	15,015
171	Eggs	13	33.87	5,792
109	Poultry	14	34.00	3,706
269	Butter	16	34.25	9,213
3,652	Total direct cost			98,194
	Gross earnings, from Mr. Wiggins' exhibit (106)			195,236
	Net earnings			97,042

On the basis of uniform increase, the earnings of the other years would be, second, $82,650; third, $87,448; fourth, $92,245.

2750 Traffic into ten southwestern counties of Idaho, eastbound

Mr. Newton's Exhibit 7, shows a varied list of commodities whose average loading would be about 18 tons. The cost would be $25.25 per car for 870 cars, total $21,968 for the first year. Gross earnings, $65,745; net, $43,777.

For the fifth year, 1,306 cars at cost of $32,976; earnings $98,683; net $65,707. For other years net earnings:

Second year	$49,260
Third "	54,742
Fourth "	60,224

The net earnings from these blocks of traffic are summarized thus:

Year	First	Second	Third	Fourth	Fifth
San Francisco to eastern Oregon	$4,408	$4,966	$5,525	$6,084	$6,642
Alkali Lake, outbound	8,500	9,562	10,625	11,688	12,750
Alkali Lake, inbound	10,215	4,582	5,113	5,644	6,175
Inbound to cross-State line	6,195	6,834	8,138	9,246	10,900
Idaho, westbound	77,853	82,650	87,448	92,245	97,042
Idaho, eastbound	43,777	49,260	54,742	60,224	65,707
	150,948	157,854	171,591	185,131	199,216

Table XX of Exhibit 16, revised by inclusion of additional earnings

Year	Return	Rate of return
First	$1,688,704	17.0%
Second	1,905,410	19.2
Third	2,128,947	21.5
Fourth	922,856	9.3
Fifth	1,035,058	10.4

2751 On the alternative proposal of division of rates for the first three years based upon the construction of the Alturas line [Modoc Northern] before the cross-State line, the return would be as follows:

Table XXII of Exhibit 16, revised by inclusion of additional earnings

Year	Return	Rate of return
First	$594,497	6.0%
Second	642,614	6.5
Third	697,363	7.0
Fourth	922,856	9.3
Fifth	1,035,058	10.4

Consideration of the return on investment as given above shows that diversion of the entire traffic of western Oregon to the cross-State line is not required in order to provide the new route with sufficient traffic to justify it. If there be no compulsory interchange between the carriers at Crescent Lake, a considerable part of the traffic which I have claimed for the new line would be subject to competition between the carriers. This would include all the "Traffic diverted" except that to and from Bend, and nearly all of the "Traffic created," eastbound.

In Table XXI, of Exhibit 16, "Traffic of cross-State line by alternative proposal," there is credited to the cross-State line earnings for the first year on this competitive traffic of $715,340 less $145,607 = $569,733, under "Traffic diverted," while Mr. Wiggins' Exhibit 28, shows $54,486 earned from eastbound "Traffic created." The sum of these is $624,219. Similar calculations show competitive traffic for the second year of $645,233; third, $666,248; fourth, $839,712; fifth, $911,508. If the cross-State line secured one-half of this business, its earnings would be as follows:

2752 *Table XXII of Exhibit 16, revised by exclusion of half of earnings on competitive traffic*

Year	Return	Rate of return
First	$282,387	2.9%
Second	320,000	3.2
Third	364,239	3.7
Fourth	503,000	5.1
Fifth	579,304	5.8

Any arrangement whereby the cross-State line can be assured of one-half of the traffic which might otherwise be carried via Alturas or Roseville, will, in my opinion, justify an order by the Interstate Commerce Commission for its building.

2753 *Exhibit No. 108.—Witness Day*

I. C. C. Docket 19680

Southern Pacific Company (Pacific lines)—Correction of Mr. Newell's Exhibit 16 as shown in Table XXI for 1st year, page 141, and as shown in Table XIX for 5th year, page 136. Corrections are made account erroneous cost of empty car haul and high cost data used

	1st year	5th year
Diverted traffic		
	(a)	(b)
1. Net earning from diverted traffic (per Mr. Newell)	$715,340	$1,047,033
2. Deduct for empty car haul	180,479	262,130
3. Leaving cost on Mr. Newell's cost data	534,861	784,903
4. Less ⅓ account cost data too high	178,287	261,634
5. Corrected figure on diverted traffic	356,574	523,269
Created traffic		
6. Total direct cost per Mr. Newell	124,589	210,568
7. Less ⅓ account cost data too high	41,530	70,189
8. Corrected direct cost	83,059	140,379
9. Gross earnings	255,918	402,497
10. Net earning on created traffic	172,859	262,118
Recapitulation		
11. Net earnings from diverted traffic	356,574	523,269
12. " " " created	172,859	262,118
13. " passenger revenue (page 142)	2,680	2,680
14. Total net increase revenue	532,113	788,067
15. Less indirect expenses and taxes	405,800	405,800
16. Return total	126,313	382,267
17. Return on $9,908,000, per cent	1.3	3.9

Southern Pacific lines (Pacific lines). August 21, 1928.

2754 *Exhibit 130—Witness Wiggins*

Docket 19680

IDAHO TRAFFIC

		Cars	Tons	Revenues to cross-State line (mileage, pro-rate)
Group A:				
Ex. #104 pp. 1, 2 & 3	1st year:			
Ex. #105 p. 2	Idaho, westbound	3,028	50,278	$158,531.21
	Idaho, eastbound	870	16,080	65,745.47
	Total	3,898	66,358	224,276.68
Ex. #104 p. 3	2nd year:			
Ex. #105 p. 2	Idaho, westbound	3,340	55,298	176,883.65
	Idaho, eastbound	980	18,108	74,047.25
	Total	4,320	73,406	250,930.90
Ex. #104 p. 3	3rd year:			
Ex. #105 p. 2	Idaho, westbound	3,340	55,298	176,883.65
	Idaho, eastbound	1,088	20,112	82,219.31
	Total	4,428	75,410	259,102.96
Ex. #104 p. 3	4th year:			
Ex. #105 p. 2	Idaho, westbound	3,340	55,298	176,883.65
	Idaho, eastbound	1,198	22,140	90,521.10
	Total	4,538	77,438	267,404.75
Ex. #104 p. 3	5th year:			
Ex. #105 p. 2	Idaho, westbound	3,652	60,317	195,236.08
	Idaho, eastbound	1,306	24,132	98,683.06
	Total	4,958	84,449	293,919.14

2755

BRIDGE TRAFFIC

		Cars	Tons	Revenues to cross-State line (mileage, pro-rate)
Group B:				
Ex. #28 p. 3	1st year:			
Ex. #106 p. 2	Oregon created, eastbound	2,200	31,254	$74,445.01
Ex. #105 p. 1	Oregon diverted	27,218	814,420	1,053,816.96
Ex. #27 p. 5-A & 5-B	S. F. to Ore. E. of Crane	75	1,350	6,302.21
	Lbr., Bend to East, diverted	3,410	102,300	93,264.86
	Totals	32,903	949,324	1,227,829.04
Ex. Mean of 1 & 3	2nd year:			
Ex. " " 1 & 3	Oregon created, eastbound	2,733	38,958	92,950.45
Ex. #105 p. 1	Oregon diverted	30,092	900,382	1,163,099.71
Ex. Mean of 1 & 3	S. F. to Ore. E. of Crane	85	1,530	7,142.50
	Lbr., Bend to East, diverted	3,836	115,080	104,936.59
	Totals	36,746	1,055,950	1,368,129.25
Ex. #28 p. 7	3rd year:			
Ex. #16 p. 133	Oregon created, eastbound	3,266	46,661	111,455.89
Ex. #105 p. 1	Oregon diverted	32,966	986,343	1,272,382.47
Ex. #16 p. 133	S. F. to Ore. E. of Crane	94	1,692	7,898.76
	Lbr., Bend to East, diverted	4,262	127,860	116,608.32
	Totals	40,588	1,162,556	1,508,345.44
Ex. #28 p. 10	4th year:			
Ex. #16 p.	Oregon created, eastbound	2,150	28,942	73,131.72
Ex. #105 p. 1	Oregon diverted	24,024	730,528	942,381.12
Ex. #16 p. 135	S. F. to Ore. E. of Crane	104	1,872	8,739.06
	Lbr., Bend to East, diverted	4,690	140,700	128,318.40
	Totals	30,968	902,042	1,152,570.30
Ex. #28 p. 12	5th year:			
Ex. #16 p.	Oregon created, eastbound	2,402	32,307	80,113.63
Ex. #105 p. 1	Oregon diverted	26,064	799,835	1,005,987.15
Ex. #16 p.	S. F. to Ore. E. of Crane	113	2,034	9,495.32
	Lbr., Bend to East, diverted	5,115	153,450	139,946.40
	Totals	33,694	967,626	1,235,542.50

2756 TRAFFIC ORIGINATING ON CROSS-STATE LINE

		Cars	Tons	Revenues to cross-State line (mileage, pro-rate)
Group C:	1st year:			
Ex. #28 p. 5	Oregon created, westbound	3,777	67,168	$201,431.53
Ex. #28 p. 3	" " eastbound	100	979	2,308.18
Ex. #105 p. 1	Alkali Lake, outbound	500	15,000	14,850.00
	Total	4,377	83,147	218,589.71
	2nd year:			
Ex. #28 p. 16	Oregon created, westbound	4,203	76,022	220,140.16
Ex. Mean of 1 & 3	" " eastbound	104	1,051	2,443.09
Ex. #105 p. 1	Alkali Lake, outbound	563	16,890	16,721.10
	Total	4,870	93,963	239,304.35
	3rd year:			
Ex. #28 p. 16	Oregon created, westbound	4,628	84,875	238,848.78
Ex. #28 p. 7	" " eastbound	108	1,123	2,577.99
Ex. #105 p. 1	Alkali Lake, outbound	625	18,750	18,562.50
	Total	5,361	104,748	259,989.27
	4th year:			
Ex. #28 p. 16	Oregon created, westbound	5,651	101,822	289,906.28
Ex. #28 p. 10	" " eastbound	113	1,196	2,708.62
Ex. #105 p. 1	Alkali Lake, outbound	688	20,640	20,433.60
	Total	6,452	123,658	313,108.50
	5th year:			
Ex. #28 p. 16	Oregon created, westbound	6,279	113,385	319,817.47
Ex. #28 p. 12	" " eastbound	117	1,238	2,771.63
Ex. #105 p. 1	Alkali Lake, outbound	750	22,500	22,275.00
	Total	7,146	137,123	344,864.10

2757 TRAFFIC DESTINED TO CROSS-STATE LINE

		Cars	Tons	Revenues to cross-State line (mileage, pro-rate)
Group D:	1st year:			
Ex. #28 p. 3	Western Oregon, eastbound	66	700	$6,144.83
Ex. #105 p. 1	Alkali Lake, inbound	265	8,750	14,005.40
Ex. #105 p. 2	Inbound tonnage to X-State line	458	3,916	16,770.50
	Total	789	13,366	36,920.73
	2nd year:			
Ex. #105 p. 1	Western Ore. Avg. 1 & 3, eastbound	66	700	6,144.83
Ex. #105 p. 1	Alkali Lake, inbound	112	3,024	6,184.08
Ex. #105 p. 2	Inbound tonnage to X-State line	505	4,320	18,501.00
	Total	683	8,044	30,829.91
	3rd year:			
Ex. #16 pp. 12 & 133	Western Oregon, eastbound	66	700	6,144.83
Ex. #105 p. 1	Alkali Lake, inbound	125	3,378	6,906.48
Ex. #105 p. 2	Inbound tonnage to X-State line	602	5,144	22,030.00
	Total	793	9,222	35,080.29
	4th year:			
Ex. #16 pp. 126 & 135	Western Oregon, eastbound	66	700	6,144.83
Ex. #105 p. 1	Alkali Lake, inbound	137	3,702	7,568.04
Ex. #105 p. 2	Inbound tonnage to X-State line	684	5,845	25,032.00
	Total	887	10,247	38,744.87
	5th year:			
Ex. #16 pp. 127 & 136	Western Oregon, westbound	66	700	6,144.83
Ex. #105 p. 1	Alkali Lake, inbound	151	4,074	8,333.88
Ex. #105 p. 2	Inbound tonnage to X-State line	806	6,890	29,508.00
	Total	1,023	11,664	43,986.71

	Cars	Tons	Revenues to cross-State line (mileage, prorate)
1st year:			
Group A. Idaho traffic	3,898	66,358	$224,276.68
" B. Bridge "	32,903	949,324	1,227,829.04
" C. From X-State line	4,377	83,147	218,589.71
" D. To X-State line	789	13,366	36,920.73
Total	41,967	1,112,195	1,707,616.16
2nd year:			
Group A. Idaho traffic	4,320	73,406	250,930.90
" B. Bridge "	36,746	1,055,950	1,368,129.25
" C. From X-State line	4,870	93,963	239,304.35
" D. To X-State line	683	8,044	30,829.91
Total	46,619	1,231,363	1,889,194.41
3rd year:			
Group A. Idaho traffic	4,428	75,410	259,102.96
" B. Bridge "	40,588	1,162,556	1,508,345.44
" C. From X-State line	5,361	104,748	259,989.27
" D. To X-State line	793	9,222	35,080.29
Total	51,170	1,351,936	2,062,517.96
4th year:			
Group A. Idaho traffic	4,538	77,438	267,404.75
" B. Bridge "	30,968	902,042	1,152,570.30
" C. From X-State line	6,452	123,658	313,108.50
" D. To X-State line	821	9,547	32,600.04
Total	42,779	1,112,685	1,765,683.59
5th year:			
Group A. Idaho traffic	4,958	84,449	293,919.14
" B. Bridge "	33,694	967,626	1,235,542.50
" C. From X-State line	7,146	137,123	344,864.10
" D. To X-State line	1,023	11,664	43,986.71
Total	46,821	1,200,862	1,918,312.45
2759 Idaho traffic, 1st year	3,898	66,358	224,276.68
" " 2nd "	4,320	73,406	250,930.90
" " 3rd "	4,428	75,410	259,102.96
" " 4th "	4,538	77,438	267,404.75
" " 5th "	4,958	84,449	293,919.14
Total, 5 years	22,142	377,061	1,295,634.43
Bridge traffic, 1st year	32,903	949,324	1,227,829.04
" " 2nd "	36,746	1,055,950	1,368,129.25
" " 3rd "	40,588	1,162,556	1,508,345.44
" " 4th "	30,968	902,042	1,152,570.30
" " 5th "	33,694	967,626	1,235,542.50
Total, 5 years	174,899	5,037,498	6,492,416.53
From X-State line, 1st year	4,377	83,147	218,589.71
" " " " 2nd "	4,870	93,963	239,304.35
" " " " 3rd "	5,361	104,748	259,989.27
" " " " 4th "	6,452	123,658	313,108.50
" " " " 5th "	7,146	137,123	344,864.10
Total, 5 years	28,206	542,639	1,375,855.93
To X-State line, 1st year	789	13,366	36,920.73
" " " 2nd "	683	8,044	30,829.91
" " " 3rd "	793	9,222	35,080.29
" " " 4th "	821	9,547	32,600.04
" " " 5th "	1,023	11,664	43,986.71
Total, 5 years	4,109	51,843	179,417.68
Idaho traffic, 5 years	22,142	377,061	1,295,634.43
Bridge " 5 "	174,899	5,037,498	6,492,416.53
From X-State, 5 "	28,206	542,639	1,375,855.93
To " " 5 "	4,109	51,843	179,417.68
Grand total, 5 years	229,356	6,009,041	9,343,324.57

2760 *Exhibit 135*

I. C. docket 19680

Statement of taxable and nontaxable lands in State of Oregon, year 1927

	Acres	Percentage
Total, taxable land	27,837,948	44.98
" nontaxable land	33,188,385	53.63
Unclassified	861,027	1.39
	61,887,360	100.00

Principal items of the nontaxable lands are:	Acres
U. S. public lands unappropriated	13,251,000
National forest reserves	13,199,388
National parks	159,360
Indian reservations	1,720,591
Land grants revested in U. S	2,467,139
Federal bird refuges	131,480
Power site reservations	261,910

Nontaxable areas in certain counties

County	Total, acres	Nontaxable	Percentage	County	Total, acres	Nontaxable	Percentage
Clackamas	1,195,520	652,850	54.61%	Josephine	1,047,680	755,425	72.10%
Coos	1,041,920	381,650	36.63%	Klamath	3,839,360	2,478,752	64.56%
Crook	1,916,160	970,330	50.64%	Lake	5,068,800	3,680,594	72.61%
Curry	1,031,680	677,992	65.72%	Lane	2,935,680	1,683,075	57.33%
Douglas	3,194,240	1,743,185	54.57%	Lincoln	645,120	177,350	27.49%
Grant	2,892,800	1,666,473	57.61%	Linn	1,445,120	464,281	32.13%
Harney	6,357,120	4,839,735	76.13%	Malheur	6,325,120	5,258,005	83.13%
Jackson	1,788,160	922,807	51.61%	Tillamook	720,000	120,927	16.80%

MEMORANDUM.

Data for this exhibit taken from 1925 census of agriculture in Oregon compiled by U. S. Department of Commerce and from Oregon Blue Book for 1927–28 issued by Secretary of State of Oregon.

2761 *Petitioner Exhibit 4*

Interstate Commerce Commission, Washington

I, George B. McGinty, secretary of the Interstate commerce Commission, do hereby certify that the attached are true copies of the following:

Complaint filed May 24, 1927, and answer of the Des Chutes Railroad Company, Oregon Short Line Railroad Company, Oregon-Washington Railroad and Navigation Company, and Union Pacific Railroad Company, filed July 5, 1927,

in case No. 19680, Public Service Commission of Oregon v. Central Pacific Railway Company et al., the originals of which are now on file and of record in the office of this Commission.

In witness whereof I have hereunto set my hand and affixed the seal of said commission this 17th day of June, A. D. 1930.

[SEAL.] GEORGE B. McGINTY,
Secretary of the Interstate Commerce Commission.

U. S. District Court, District of Oregon. Filed Sep. 29, 193. G. H. Marsh, clerk, by H. L. Kenyon, deputy.

2762 [Omitted.]

2763 Before the Interstate Commerce Commission

Docket No. 19680

Filed July 5, 1927

PUBLIC SERVICE COMMISSION OF OREGON, COMPLAINANT

vs.

CENTRAL PACIFIC RAILWAY COMPANY ET AL., DEFENDANTS

ANSWER OF DEFENDANTS DES CHUTES RAILROAD COMPANY, OREGON SHORT LINE RAILROAD COMPANY, OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, AND UNION PACIFIC RAILROAD COMPANY

The defendants Des Chutes Railroad Company, Oregon Short Line Railroad Company, Oregon-Washington Railroad & Navigation Company, and Union Pacific Railroad Company for answer to the complaint herein admit, deny, and allege as follows:

I

Answering Paragraph II they deny that the Des Chutes Railroad Company is a common carrier engaged in the transportation of passengers or property, wholly or at all, by railroad between points in the State of Oregon and points in other States, or that as such common carrier it is subject to the provisions of the interstate commerce act as amended or supplemented, except that by railroad ownership and by trackage rights acquired by it from the defendant Oregon Trunk Railway, the defendant Des Chutes Railroad Company has a line of railroad extending from a point of connection with the
2764 main line of the Oregon-Washington Railroad & Navigation Company near the mouth of the Deschutes River in Oregon southerly to Bend, Oregon, and that said line of railroad is, and has been for many years last past, operated under lease by said Oregon-Washington Railroad & Navigation Company.

They deny that the Union Pacific Railroad Company is a common carrier of passengers or property, wholly or at all, by railroad between various points in Utah or Colorado or Wyoming or Kansas or Nebraska and any point or points in the State of Oregon, or that said Union Pacific Railroad Company has ever owned or operated or now owns or operates as a common carrier of passengers or property or otherwise or at all any railroad within the State of Oregon. They deny that the Union Pacific Railroad Company owns the entire capital

stock of the Oregon Short Line Railroad Company, or that it and the Oregon Short Line Railroad Company together own the entire capital stock of the Los Angeles & Salt Lake Railroad Company. They deny that the four corporations, to wit, Union Pacific Railroad Company, Oregon Short Line Railroad Company, Oregon-Washington Railroad & Navigation Company, and Los Angeles & Salt Lake Railroad Company, are treated as one or that their operations or the statistics relating thereto are included in the report of the Union Pacific Railroad Company to the Interstate Commerce Commission or to the commissions or other governmental bodies, Federal or State, to
2765 which railroads currently report as required by law, but they admit that the Union Pacific Railroad Company directly and indirectly by stock ownership in and through the other railroad companies, last above referred to, controls the said other companies referred to as Union Pacific system companies and that said four companies together consitute the Union Pacific system and that the railroads comprising said system are under common control and management and are operated as a single system, but they deny that they are operated as a unit.

II

Answering Paragraph III of the complaint these answering defendants deny that the defendant railroad companies named in Paragraph II of said complaint provide in substance the service of transportation of passengers or property performed by common carriers within the boundaries of the State of Oregon either in interstate or intrastate commerce, or that either the Union Pacific Railroad Company or the Los Angeles & Salt Lake Railroad Company have or do perform any transportation service of passengers or property as common carriers or otherwise within the State of Oregon, nor has, nor does, either of said last named companies originate any part of the passenger or freight traffic moving from points within the State of Oregon in intrastate or interstate commerce.

III

For answer to Paragraph IV of the complaint these answering defendants deny that they have failed or refused, or still
2766 fail or refuse, to provide a very large area or any area in central Oregon with adequate or reasonable facilities of transportation by railroad or that the line of railroad from Ontario, Oregon, to Crane or to Harriman, Oregon, is a part of a line of railroad projected many years ago by the Union Pacific system to extend from Ontario in a westerly direction across the State to a connection at some suitable point in western Oregon with the Southern Pacific Company; deny that between (a) Crane or Harriman in eastern Oregon and (b) Crescent Lake or some point in the vicinity thereof on the existing line of railroad operated by the Southern Pacific Company and commonly known as the Natron cutoff, there is any practicable or feasible route for the construction of

a line of railroad which, when built, would provide such facilities; deny that adequate provision, without delay, of such facilities is demanded by public interest or convenience or necessity; but allege the fact to be that said route proposed in said Paragraph IV of said complaint traverses for nearly its entire distance, 175 miles more or less, a desert country officially and commonly characterized and known as the Great High Desert, and that the area tributary to said route on either side thereof is for nearly the entire distance barren of production and affords no present or prospective possibility of traffic for the support of said proposed line of railroad.

2767 Defendants deny that the expense involved in the extension of lines aforesaid will not impair the ability of the defendants, or any of them, to perform their duty to the public.

IV

In answer to Paragraph V of the complaint these answering defendants deny that in consequence of the failure or refusal of the defendants, or some of them, to build or operate a line of railroad through or across central Oregon as alleged in the complaint the development of a vast area of territory is prevented or rendered virtually impossible or that the natural resources of such undeveloped area or its possibility for producing traffic for a railroad across the State are rendered of little or no value or that such possibilities are extensive or substantial, or that much or any of the freight or passenger traffic, either intrastate or interstate, handled by the defendants from or to points in Oregon must traverse unduly or unreasonably circuitous routes or that much or any money or time is lost to the shipping or traveling public through being compelled to use those circuitous routes or to pay rates or fares based on the distances thereover, or that opportunity is lost for effecting largely increased economy or efficiency in handling the lumber of the Willamette Valley moving to eastern destinations or that the products of Oregon in considerable or any substantial part are subjected to excessive or unreasonable delay

2768 in reaching the principal seaports or consuming markets of the State, or that the severity of car shortages in Oregon recurring periodically in the past or the losses therefrom suffered by shippers have been augmented needlessly or unreasonably or so will continue to be until the extension of lines sought in the complaint has been made, or that interior Oregon is denied benefits of reasonable competition between the defendants in the matter of the services or facilities of transportation due to be accorded by them, or is deprived of adequate outlets of its products in California or in western Oregon.

V

In answer to Paragraph VI of the complaint these answering defendants deny that the construction or operation of a line of railroad from Crane or Harriman westward to a connection with the Southern

Pacific Company's rails at Crescent Lake or some point near thereto or the establishment between defendants or the projected line of railroad, of through routes or joint rates or divisions thereof are necessary or desirable in the public interest, or that such joint or common use of the projected line should be prescribed as may be just or reasonable or as will afford adequate service or will maintain or assure maximum competition or the most efficient use of cars, equipment, or facilities; deny that the alleged extension sought in the complaint is reasonably or at all required in the interest of public conve-
2769 nience or necessity or that the expense involved therein will not impair the ability of the defendants, or any of them to perform their duty to the public.

VI

For answer to Paragraph VIII of the complaint these answering defendants deny that by reason of the facts alleged in the complaint or otherwise, the defendants, or any of them, unlawfully or in violation of sections 1 or 15 or 15a of the interstate commerce act have failed or refused, or still fail or refuse, to give due consideration to the transportation needs of the State of Oregon or to the necessity under honest, efficient, or economical management of enlarging their existing transportation facilities in order to provide the people of the State of Oregon with adequate transportation or to that end to extend their lines or to operate the same substantially as demanded in the complaint.

For their first, further, and separate answer and defense to the complaint herein these answering defendants allege:

I

That during the year 1905 the interests by which the properties comprising the then so-called Union Pacific system and the properties then comprising the so-called Southern Pacific lines were then controlled, caused to be organized under the laws of the State of Oregon a corporation designated and known as "Oregon Eastern Rail-
2770 way Company." That said company was incorporated with power to construct, maintain, and operate a line of railroad across the State of Oregon from Natron, near Eugene, Oregon, to Ontario, Oregon, with lines radiating therefrom as follows:

South to Klamath Falls, Oregon, north to Agency Plains in the Deschutes Canyon in Oregon, and a third line from said main line south to Lakeview, Oregon.

That said Oregon Eastern Railway Company completed its surveys on said route and by amending its articles of incorporation to authorize it so to do acquired the then constructed line of railroad from Weed, California, to Klamath Falls, Oregon, and proceeded with the construction north from said Klamath Falls toward a junction with said proposed cross-State line at or near Odell, Oregon. It also proceeded with construction south from Natron, Oregon, toward said Odell, and the line from Ontario to Vale having been constructed on

said cross-State route, it proceeded with construction west from Vale, Oregon, through the Malheur Canyon and into the Harney Valley in Oregon.

That said construction proceeded, but not without some interruptions, until the year 1910 when the defendant Oregon-Washington Railroad & Navigation Company was organized and thereupon the rights of way acquired and the lines constructed east and north of Odell were conveyed to said Oregon-Washington Railroad &
2771 Navigation Company, except the line in the Deschutes Canyon which had been constructed in the meantime by the defendant Des Chutes Railroad Company. That upon its completion the said line in the Deschutes Canyon was leased by said Des Chutes Railroad Company to said defendant Oregon-Washington Railroad & Navigation Company and the same has been operated by said lessee ever since. That the line from Natron, Oregon, south and the line from Weed, California, north through Klamath Falls, Oregon, to a connection with the line south from Natron were conveyed by said Oregon Eastern Railway Company to the Central Pacific Railway Company.

That after said conveyances were made as aforesaid and in the month of December, 1912, Union Pacific Railroad Company, by decision of the Supreme Court of the United States, was directed to divest itself of the control of the Southern Pacific Company and by reason of the control of the Central Pacific Railway Company by the Southern Pacific Company said Supreme Court's decision resulted in cutting the route into Natron, Oregon, from Ontario, Oregon, at Odell Junction and prevented said Oregon-Washington Railroad & Navigation Company from reaching its terminal at Portland, Oregon, by said route.

That the construction of said Central Pacific line of railroad from Natron, Oregon, through Klamath Falls to Weed, California, has been completed by said Central Pacific Railway Company and the same has been, since completed, and is being operated by the
2772 defendant Southern Pacific Company. That upon the rendition of the said decision of said Supreme Court of the United States as aforesaid the said defendant Oregon-Washington Railroad & Navigation Company completed its line of railroad into the Harney Valley in Oregon and has since extended the same to Crane and later to Burns, the county seat of Harney County, Oregon. That the defendant Oregon Short Line Railroad Company has operated and is operating the said line of railroad from Ontario to Burns under lease from said defendant Oregon-Washington Railroad & Navigation Company and that said line of railroad westerly from Ontario has been unprofitable from the beginning and the gross revenues from the operation of said line have been at all times insufficient to meet the operating expenses and taxes on said line, and the operation thereof has resulted in deficits amounting to hundreds of thousands of dollars.

II

These answering defendants allege that the said proposed line of railroad on said cross-State survey from Crane or Harriman to Crescent Lake traverses an area of unproductive country with no substantial or potential tonnage tributary thereto to sustain said line if constructed and that said line so extended would involve an initial expenditure of some eight millions of dollars in addition to the investment already made in the Ontario-Burns line, and said proposed construction is not reasonably required in the interests
2773 of public convenience and necessity and would, if made, involve the Oregon-Washington Railroad & Navigation Company and the Oregon Short Line Railroad Company, if the latter operated the same, in such great expense and continuing loss that their ability to perform their duty to the public would be greatly impaired. That said proposed cross-State line if built to Crescent Lake or Odell or other near-by point of connection with the Central Pacific so-called Natron cut-off line, would terminate on the eastern slope of the Cascade Mountains some 325 miles, more or less, from its connection with the line of the Oregon Short Line Railroad Company at Ontario, Oregon, and with no possibility of connection on the west with the line or terminal of said Oregon-Washington Railroad & Navigation Company and that the same could not be operated to advantage or profit of either the public or of these answering defendants, or any of them.

III

That the line of railroad proposed by the complaint herein would, if constructed, be and constitute a branch line from the constructed and operated railroad of the defendant Oregon-Washington Railroad & Navigation Company extending from Ontario to Burns, if constructed by said Oregon-Washington Railroad & Navigation Company; and if constructed by the Central Pacific Railway Company the same would constitute a branch line built from the so-called
2774 Natron cut-off of said Central Pacific Company and the same would not and does not constitute an extension from the Ontario-Burns line or an extension from the said Natron-Weed line of the defendant Central Pacific Railway Company.

For their second, further and separate answer to the complaint herein these answering defendants allege that if paragraphs 21 and/or 4 of section 1 or paragraph 3 of section 15 or paragraphs 3 or 4 of section 15a of the "interstate commerce act" be construed and/or applied as conferring upon this commission authority to require these answering defendants, or any of them, to construct, maintain, or operate the line of railroad petitioned for in the complaint herein, then the said provisions of said act, and particularly the portion thereof relative to extension of lines of railroad, is unconstitutional and void in that the same would operate to deprive these answering defendants, or such of them, as may be ordered to construct said proposed line of railroad, of their or its property without due process of

law, and to take from these answering defendants or such of them as may be ordered by this commission to construct said proposed line of railroad, their private property for public use without just compensation, all in violation of the 5th amendment to the Constitution of the United States of America.

Wherefore these answering defendants pray that the com-
2775 plaint herein be dismissed and the relief therein prayed for, or any relief, be denied.

6/30/27.

DES CHUTES RAILROAD COMPANY,
OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY,
OREGON SHORT LINE RAILROAD COMPANY,
UNION PACIFIC RAILROAD COMPANY,
By H. A. SCANDRETT and A. C. SPENCER,

Their Attorneys.

1416 Dodge Street, Omaha, Nebraska.

2776 *Petitioner Exhibit 5*

Interstate Commerce Commission, Washington

I, George B. McGinty, secretary of the interstate commerce commission, do hereby certify that the attached are true copies of the following:

Answer of defendants, Spokane, Portland and Seattle Railway Company, Oregon Trunk Railway and Oregon Electric Railway Company filed June 28, 1927,

Answer of Great Northern Railway Company filed June 30, 1927,

Answer of Central Pacific Railway Company and Southern Pacific Company, filed July 5, 1927, and

Answer of Northern Pacific Railway Company filed July 8, 1927,

in case No. 19680, Public Service Commission of Oregon v. Central Pacific Railway Company et al., the originals of which are now on file and of record in the office of this commission.

In witness whereof I have hereunto set my hand and affixed the seal of said commission this 21st day of August, A. D. 1930.

[SEAL] GEORGE B. MCGINTY,
Secretary of the Interstate Commerce Commission.

U. S. District Court, District of Oregon. Filed Sept. 29, 1930. G. H. Marsh, clerk, by H. L. Kenyon, deputy.

2777 Before the Interstate Commerce Commission

Docket No. 19680

Filed June 28, 1927, Interstate Commerce Commission

PUBLIC SERVICE COMMISSION OF OREGON, COMPLAINANT

vs.

CENTRAL PACIFIC RAILWAY COMPANY ET AL., DEFENDANTS.

ANSWER OF DEFENDANTS, SPOKANE, PORTLAND AND SEATTLE RAILWAY COMPANY, OREGON TRUNK RAILWAY, AND OREGON ELECTRIC RAILWAY COMPANY

Now come defendants, Spokane, Portland and Seattle Railway Company, Oregon Trunk Railway, and Oregon Electric Railway Company, and for their answer to the complaint herein deny that the construction and operation of the proposed line of railroad described in the complaint are necessary or desirable in the public interest and deny that such construction and operation are reasonably required in the interest of public convenience and necessity, and defendants allege that the expense involved therein would impair the ability of the defendants to perform their duty to the public.

For their further answer these defendants allege that the territory described in the complaint as not served with facilities of transportation by railroad is not territory which these defendants, or any of them, have ever undertaken to serve and the proposed line of railroad as described in the complaint would not be an extension of any line of railroad of any of these defendants. These defendants therefore are not willing to construct or to participate in the construction of any of the proposed lines of railroad as described in the complaint.

2778 Wherefore these defendants pray that the complaint herein be dismissed.

SPOKANE, PORTLAND AND SEATTLE RAILWAY COMPANY,
OREGON TRUNK RAILWAY,
OREGON ELECTRIC RAILWAY COMPANY,
By CAREY DEW,
C. A. HART,
Their attorneys.

2779 Before the Interstate Commerce Commission

I. C. C. docket No. 19680

Filed June 30, 1927, Interstate Commerce Commission

PUBLIC SERVICE COMMISSION OF OREGON, COMPLAINANT

vs.

CENTRAL PACIFIC RAILWAY COMPANY ET AL., DEFENDANTS

ANSWER OF GREAT NORTHERN RAILWAY COMPANY

Comes now the Great Northern Railway Company, one of the defendants above named, and for its answer to the complaint herein denies each and every allegation contained in paragraphs 4, 5, 6, and 8 and admits the allegations contained in paragraphs 1, 2, 3, and 7.

Answering further, this defendant states that the Great Northern Railway Company now has no lines in the State of Oregon except the portion of its line extending from Portland, Oregon, to Seattle, Washington. This defendant has filed an application with the Interstate Commerce Commission for permission to operate over the lines of the Spokane, Portland & Seattle Railway, the Oregon Trunk Railway, and the Des Chutes Railroad from Spokane through Wishram, Washington, and up the Deschutes River to Bend, and also for permission to acquire or construct and operate a line from Bend to a connection with the Southern Pacific at Paunina and to operate thence over the Southern Pacific Railway's line to Klamath Falls. This defendant expects to acquire one-half of the stock of the Oregon, California & Eastern Railway operating from Klamath Falls to Sprague River Landing. Except as above stated the Great Northern Railway Company does not now own and does not expect to own, acquire, or operate any railroads in Oregon or any line of railroad entering Oregon via the route described in the complaint. The only
2780 logical and direct route into Oregon for this defendant is through Spokane and down the Columbia River and up the Deschutes River. The Great Northern Railway Company is not willing to construct or participate in the construction, maintenance, or operation of the proposed line of railway referred to in the complaint.

The construction of said proposed railroad by the Great Northern Railway Company is not reasonably required in the interest of the public convenience and necessity, and the expense incident to such construction would impair the ability of this defendant to perform its duty to the public now served by its lines.

Wherefore, having fully answered, defendant Great Northern Railway Company prays that the complaint be dismissed.

F. G. DORETY,
R. J. HAGMAN,
Attorneys for defendant Great Northern Railway Company,
1120 Great Northern Ry. Building, Saint Paul, Minnesota.

Dated June 26, 1927.

2781 Before the Interstate Commerce Commission

Docket No. 19680

Filed July 5, 1927, Interstate Commerce Commission

PUBLIC SERVICE COMMISSION OF OREGON, COMPLAINANT

vs.

CENTRAL PACIFIC RAILWAY COMPANY ET AL., DEFENDANTS

ANSWER OF CENTRAL PACIFIC RAILWAY COMPANY AND SOUTHERN PACIFIC COMPANY

Central Pacific Railway Company and Southern Pacific Company for their answer to the complaint herein, admit, deny and allege as follows, to wit:

I

With respect to the allegations set forth in Paragraph III of the complaint these defendants admit that the defendants names in this proceeding perform as common carriers the substantial part of the interstate and intrastate commerce furnished within and to and from the State of Oregon.

II

With respect to the allegations set forth in Paragraph IV of the complaint these defendants deny each and every allegation thereof, and in relation thereto these defendants state that although
2782 there is a large area in Central Oregon not served by railroad, there is no public interest, convenience or necessity to be served by the construction of a line of railroad into or over such area.

III

With respect to the allegations set forth in Paragraphs V, VI, VII, and VIII of the complaint these defendants deny each and every allegation therein contained.

As a further and separate defense to the complaint herein, these defendants allege:

IV

That there is no authority in law for the granting of the relief prayed for in the complaint herein; that if paragraph 21 of section 1 of the act to regulate commerce, as amended, or if any other paragraph or provision of the act to regulate commerce, to which reference is made in said complaint, be construed separately or together as conferring upon the Interstate Commerce Commission authority to require these defendants or either of them to construct or join in the construction of the line of railroad mentioned in and proposed by the complaint herein, or to construct, maintain or operate said line of

railroad described and petitioned for in said complaint, these defendants allege that said provision or provisions of said act, and
2783 particularly the provision thereof relative to the extension of lines of railroad, is unconstitutional and void in that the same would operated to deprive these defendants and each of them of their property without due process of law, and take from these defendants and each of them their private property for public use without just compensation, all in violation of the fifth amendment to the Constitution of the United States.

Wherefore, these defendants, Central Pacific Railway Company and Southern Pacific Company, pray that the complaint herein be dismissed, and that no relief be granted to the complainant as prayed for or otherwise.

GUY V. SHOUP,
J. R. BELL,
BEN C. DEY,
Attorneys for defendants, Central Pacific Railway Company and Southern Pacific Company.

2784 Before the Interstate Commerce Commission

Docket No. 19680

Filed July 8, 1927, Interstate Commerce Commission

PUBLIC SERVICE COMMISSION OF OREGON, COMPLAINANT

vs.

CENTRAL PACIFIC RAILWAY COMPANY, DES CHUTES RAILROAD Company, Great Northern Railway Company, Northern Pacific Railway Company, Oregon Electric Railway Company, Oregon Short Line Railroad Company, Oregon Trunk Railway, Oregon-Washington Railroad & Navigation Company, Southern Pacific Company, Spokane, Portland & Seattle Railway Company, and Union Pacific Railroad Company, defendants

ANSWER OF NORTHERN PACIFIC RAILWAY COMPANY

Now comes the Northern Pacific Railway Company and for its answer to the complaint of the complainant herein, admits the allegations contained in paragraphs Numbered I, II, and III of the complaint.

Defendant, Northern Pacific Railway Company, specifically denies that the construction and operation of the proposed line of railroad described in the complaint are necessary or desirable in the public interest, and specifically denies that such a construction and operation are reasonably required in the interest of public convenience and necessity; and this defendant alleges that the expense involved in such construction and operation would impair its ability to perform its duties to the public.

2785 Except as herein specifically admitted, this defendant denies each and every allegation contained in the complaint.

NORTHERN PACIFIC RAILWAY COMPANY,
By D. F. LYONS,
B. W. SCANDUTT,
Its counsel.

2786 *Petitioners Exhibit 8*

Interstate Commerce Commission

Construction of railroad lines in eastern Oregon

No. 14392 [1]

PUBLIC SERVICE COMMISSION OF OREGON

v.

CENTRAL PACIFIC RAILWAY COMPANY ET AL.

Submitted February 5, 1926. Decided May 3, 1926

U. S. District Court, District of Oregon. Filed Sept. 29, 1930, G. H. Marsh, clerk, by H. L. Kenyon, Deputy.

1. Complaint of the Public Service Commission of Oregon seeking an order or orders under paragraph (21) of section 1 of the act, requiring construction and operation of various lines of railway in the interior portion of the State of Oregon, dismissed.

2. Certificate issued conditionally authorizing the Oregon, California & Eastern Railway Company to construct certain lines of railroad in Klamath and Lake Counties, Oreg.

3. Acquisition by the Southern Pacific Company of control of the Oregon, California & Eastern Railway Company by purchase of capital stock, conditionally approved and authorized.

4. Certificate issued conditionally authorizing the Oregon Trunk Railway to construct and operate a line of railroad in Des Chutes and Klamath Counties, Oreg.

5. Certificates issued authorizing the Central Pacific Railway Company to construct a line of railroad in Klamath County, Oreg., and Modoc County, Calif.

6. Acquisition by the Southern Pacific Company of control of the Nevada-California-Oregon Railway by purchase of capital stock, approved and authorized.

7. Authority for permission to retain excess earnings denied

[1] This report also embraces finance docket No. 4730, construction of lines by Oregon, California & Eastern Railway Company; finance docket No. 4810, construction of lines by Oregon Trunk Railway; Finance docket No. 4914, construction of line by Central Pacific Railway Company in Klamath County, Oreg., and Modoc County, Calif.; finance docket No. 5111, construction of line by Central Pacific Railway Company in Modoc County, Calif.; finance docket No. 4924, acquisition of control of Nevada-California-Oregon Railway Company by Southern Pacific Company; and finance docket No. 4941, acquisition of control of Oregon, California & Eastern Railway Company by Southern Pacific Company.

2787 Appearances in No. 14392.

I. H. Van Winkle, attorney general, J. M. Devers and Wm. P. Ellis, assistant attorneys general, and J. W. McCulloch for complainant.

Fred C. Graves and Samuel L. Newton for Public Utilities Commission of Idaho; and Hugh Gordon for Railroad Commission of the State of California, interveners.

J. W. McCulloch for Central Oregon Development League, R. S. Hamilton for Bend (Oreg.) Commercial Club, A. R. Bowman for Crook County (Oreg.) Chamber of Commerce, Joseph N. Teal and William C. McCulloch for Portland (Oreg.) Chamber of Commerce, J. T. Brand for city of Marshfield (Oreg.), Marshfield Chamber of Commerce and North Bend (Oreg.) Chamber of Commerce, and Seth Mann for San Francisco (Calif.) Chamber of Commerce and Oakland (Calif.) Chamber of Commerce, interveners.

Ben C. Dey and Paul P. Farrens for Central Pacific Railway Company and Southern Pacific Company, Arthur C. Spencer, J. V. Lyle and H. A. Scandrett for Union Pacific System, and Carey & Kerr and Charles A. Hart for Oregon Trunk Railway, defendants.

Appearances in F. D. Nos. 4730, 4810, 4914, 4924, and 4941.

Wm. F. Herrin, J. R. Bell, E. J. Foulds, and Ben C. Dey for Central Pacific Railway Company and Southern Pacific Company.

Carey & Kerr and Charles A. Hart for Oregon Trunk Railway.

R. C. Groesbeck, Wilson & Reilly, and James G. Wilson for Oregon, California & Eastern Railway Company.

I. H. Van Winkle, attorney general, and J. M. Devers and Wm. P. Ellis, assistant attorneys general, for Public Service Commission of Oregon.

Charles Moran and A. B. Roehl for Nevada-California-Oregon Railway.

J. T. Shaughnessy for Public Service Commission of Nevada and Reno (Nev.) Chamber of Commerce.

Carl I. Wheat for Railroad Commission of California.

Joseph N. Teal and William C. McCulloch for Portland Chamber of Commerce and Portland Traffic and Transportation Association.

R. L. Shepherd for Oregon City Chamber of Commerce and Hawley Pulp & Paper Company.

Arthur D. Hay, district attorney, for Lake County, Oreg.

E. A. LaRue for Order of Railway Conductors.

G. W. Burbank for Brotherhood of Locomotive Engineers.

J. A. Ford for Brotherhood of Locomotive Firemen.

Appearances in F. D. No. 5111.

J. R. Bell and J. I. King for Central Pacific Railway Company.

Report of the commission

Aitchison, commissioner.

In a broad way, the proceedings dealt with in this report require our answer as to the railroad facilities which shall be afforded eastern Oregon and northern California, and as to whether in the construction

of additional railroad lines needed to serve that territory—possibly the largest area of the country remaining without rail mileage—
the principle of maintaining competition between carriers
2788 shall be observed, or the policy of creating zones of influence
so that the field shall be preserved for intensive cultivation by one rail carrier under appropriate conditions and reservations. A number of proceedings on our dockets must be given common consideration to permit as comprehensive a view of the situation as the nature of the subject matter and the importance of the determination require. Although these proceedings were not all heard together, they may for convenience be disposed of in this report. While portions of northern California are embraced in the pending proceedings, the greater portion of the territory involved is within the State of Oregon, east of the Cascade Mountains, and references to places or sections will be considered as within Oregon unless the fact is otherwise made to appear.

Statement of the issues

The Oregon commission case.

In the complaint in No. 14392, filed October 30, 1922, the Public Service Commission of Oregon, proceeding under paragraph (21) of section 1 of the interstate commerce act, alleges that public convenience and necessity demand the construction of adequate and efficient railroads between certain parts of Oregon for the transportation of freight and passengers. It asserts that the expense of construction of such roads will not impair the ability of defendants to perform their duties to the public.[2] The Oregon commission asks us to require defendants, or some one or more of them, to extend and construct a railroad from Crane westward to Oakridge to connect with roads that will afford the territory thus traversed market outlets in western Oregon and California; also to extend and construct connections between the railroad terminals at Bend and Kirk, and a branch line to Lakeview. It asks that these projected lines be afforded such joint and common use of existing railroads as will justify the desired construction and adequately serve the districts concerned, and that these railroads be so grouped and such joint and common use ordered as will maintain and assure maximum competition and the most efficient use of cars, equipment and facilities.

Various Oregon municipalities and commercial organizations, and the Public Utilities Commission of Idaho, the Railroad Commission of California and the Chambers of Commerce of San Francisco and Oakland, Calif., intervened and were heard in general support of the complaint.

[2] The defendants in the complaint are Central Pacific Railway Company, the Southern Pacific Company, the Oregon-Washington Railroad & Navigation Company, the Oregon Short Line Railroad Company, the Oregon Trunk Railway, and the Des Chutes Railroad Company. The Union Pacific Railroad Company, Oregon Electric Railway Company, and Spokane, Portland & Seattle Railway Company were afterwards made defendants.

Hearing was held upon this complaint, and a report proposed by the examiner was served upon the parties, in which it was proposed to grant a large measure of the relief sought. Exceptions were filed by defendants, and answer by complainant. The case was submitted on briefs and oral argument March 28, 1925, but the filing soon thereafter of the various applications hereinafter discussed has led us to withhold a decision until the whole matter could be determined. What these applications propose is largely in substitution for the proposals of the Oregon commission, so far as meeting local needs is concerned.

2789 Finance docket No. 4730. The Oregon, California & Eastern Railway Company, frequently referred to as the "Strahorn Railroad," owns and operates in Klamath County a line of railroad approximately 40 miles long, extending from Klamath Falls eastward and northeastward to Sprague River.

By application filed March 26, 1925, pursuant to the provisions of paragraphs (18) to (21) of section 1 of the act, the Oregon, California & Eastern seeks a certificate of public convenience and necessity authorizing it to construct three branches, from the northerly terminus at Sprague River, as follows: (1) Northerly 63 miles to Silver Lake, in Lake County, Oreg.; (2) from a point on the proposed Silver Lake branch approximately 20 miles north of Sprague River, northwesterly along the Williamson River approximately 15 miles, in Klamath County; (3) from Sprague River southeasterly approximately 65 miles to Lakeview.

Finance docket No. 4941. The Southern Pacific Company, under the provisions of paragraph (2) of section 5 of the act, filed application for authority to acquire control by stock ownership of the Oregon, California & Eastern Railway Company. This application was made pursuant to a contract executed February 3, 1925, between the Southern Pacific Company and Robert E. Strahorn. Following the execution of the contract and in accordance with the terms thereof, the Southern Pacific acquired and now owns slightly less than a majority of the capital stock and all of the outstanding first mortgage bonds of the Oregon, California & Eastern. Approval of the purchase of the balance of the stock is now sought by the Southern Pacific.

Finance dockets Nos. 4914 and 5111. In the earlier of these proceedings, the Central Pacific Railway Company by application filed June 20, 1925, seeks a certificate of public convenience and necessity authorizing the construction of a line of railroad from a point on its existing line 2.2 miles south of Klamath Falls, southeasterly to Cornell, Modoc County, Calif., 36 miles. On October 2, 1925, but not in time for assignment and consolidation with the above-mentioned applications, the Central Pacific Railway Company filed an application, finance docket No. 5111, for a certificate authorizing the construction of 62.1 additional miles of railroad forming an extension of the proposed Klamath Falls-Cornell line. This added mileage extends from Cornell southeasterly to Alturas, Modoc County, Calif., a city located on the Nevada-California-Oregon Railway. All the essential facts with respect to No. 5111 have been covered by evidence

in the present record, and have been discussed in argument. No one requests a separate hearing. The proposed construction involved forms a continuous line of railroad from a point on the existing line of the Central Pacific near Klamath Falls, through Cornell to Alturas. It is an essential part of the general plan, and will be dealt with in this report.

Finance docket No. 4924. The Southern Pacific Company, under the provisions of paragraph (2) of section 5 of the act, applies for authority to acquire control by stock ownership of the Nevada-California-Oregon Railway, a Nevada corporation, owning and operating a narrow-gauge railroad 154.63 miles in length extending from Lakeview southerly through Alturas, Calif., to a point of connection with the Fernley branch of the Central Pacific (operated as a part of Southern Pacific system) at Wendel, Lassen County Calif. The application was filed pursuant to a contract executed April 30, 1925,
2790 by the Southern Pacific and Charles Moran, representing the owners of all the capital stock and bonds of Nevada-California-Oregon.

Finance docket No. 4810. The Oregon Trunk Railway, a Washington corporation, whose capital stock is owned by the Spokane, Portland & Seattle Railway Company, whose stock in turn is owned equally by the Great Northern Railway Company and the Northern Pacific Railway Company, now owns and operates a railroad extending from Fallbridge, Wash., on the north bank of the Columbia River, southerly along the Deschutes River a distance of about 151 miles to Bend, Deschutes County, Oreg. By application filed May 5, 1925, the Oregon Trunk requests a certificate of public convenience and necessity, authorizing the construction of an extension of its existing line from Bend in a southwesterly direction a distance of 66 miles to a point near Paunina, a station on the recently constructed portion of the Natron cut-off line of the Central Pacific, and thence southeasterly across Klamath Marsh and along the Williamson River to Sprague River, approximately 70 miles, and thence south and west approximately 42 miles to Klamath Falls, making a total extension of 178 miles from Bend.

The Southern Pacific, the Central Pacific, and the Oregon, California & Eastern oppose the Oregon Trunk's application.

Between Black Butte, near Weed, and Grass Lake, Calif., there is in progress certain new construction authorized by us October 8, 1925, known as the "Black Butte cut-off." Construction of Black Butte cut-off by C. P. Ry., 99 I. C. C. 780.

By consent, the finance docket applications, other than No. 5111, were consolidated for hearing and argument. The public service and railroad commissions of Oregon, California, and Nevada intervened, as did various civic organizations.

The Oregon commission does not oppose the plans of the railway companies except so far as they may be considered a substitute for the proposed cross-State line between the Natron cut-off and the connection with the Oregon Short Line at Crane or Harriman. The

route between western Oregon and eastern territory by way of Crane would be more than 200 miles shorter than that of the Southern Pacific after completion of the proposed line of the latter between Klamath Falls and Wendel. Shipping interests of southern Idaho join in the request for a cross-State line in Oregon, to afford them more direct communication with California. The Southern Pacific opposes the plan of the Oregon Trunk for a line to Klamath Basin on the ground that it would be an unnecessary duplication of facilities; that it is in position to serve the Klamath Basin adequately with its own lines; and that the amount of tonnage now tributary to the Oregon Trunk is approximately as great as that tributary to the Southern Pacific in southern Oregon, including the lines of the Oregon, California & Eastern. It cites the report in construction of Natron cut-off by Central Pacific Ry., 82 I. C. C. 185, which states that one of the principal purposes of the new line was to serve the local territory. The Oregon Trunk represents that the Southern Pacific, with its proposed control of the Oregon, California & Eastern and Nevada-California-Oregon, will monopolize about 70 per cent of the timber tonnage east of the Cascades, in addition to its well-known predominating influence in the much more important traffic territory west of the Cascades; and that the public interest, as well as the requirements of the northern lines for additional tonnage, justifies the construction of its proposed line to Klamath Falls.

2791 The Railroad Commission of California expresses its desire that the Southern Pacific shall acquire control of the Nevada-California-Oregon, and that the Central Pacific shall build its proposed line from Klamath Falls to Alturas. The Public Service Commission of Nevada and the Reno Chamber of Commerce support the applications of the Southern Pacific and Central Pacific, as advantageous to the people of Nevada.

Four transcontinental railroad systems are directly concerned with the issues before us. (1) The Union Pacific system, as is generally known, includes, through stock and bond ownership, the Oregon Short Line Railroad Company and the Oregon-Washington Railroad & Navigation Company, formerly the Oregon Railroad & Navigation Company. Its main lines run through the States of Nebraska, Kansas, Colorado, Wyoming, Utah, Idaho, Oregon, and Washington, from the Missouri River to the north-coast Pacific ocean ports. Generally, the course of the Union Pacific may be described as lying in the tier of States second from the Canadian boundary. The Des Chutes Railroad is a subsidiary of the Oregon-Washington, and operates from the Columbia River to Bend. For the purposes of this report we need not consider the Salt Lake-Los Angeles line of the Union Pacific. (2) The Southern Pacific Company, with its two great main lines for transcontinental traffic: The Sunset route through El Paso to San Francisco Bay; and the Ogden route, or the Central Pacific line, from Ogden to San Francisco Bay; which lines generally may be described as occupying states still further south than the Union Pacific, or else in prolongation of the Union Pacific. A third

main line, the Shasta route, extends northerly from San Francisco Bay to Portland, and there connects with the Union Pacific and the Northern lines. (3) The Northern Pacific Railway Company and (4) the Great Northern Railway Company occupy the northern tier of States westward from the Mississippi River at St. Paul and Minneapolis, Minn., to the ports upon Puget Sound. A jointly owned line, the Spokane, Portland & Seattle Railway, gives access from the main lines of the Northern lines to Portland and Astoria; and subsidiaries, the Oregon Electric Railway and Oregon Trunk Railway, penetrate the Willamette and Des Chutes Valleys, respectively

A large portion of central and eastern Oregon, northern California, and northern Nevada, remains without railroad transportation. This territory may roughly be described as a triangle with its base extending from Sacramento, Calif., to Portland, with Salt Lake City, Utah, at its apex. Railroad development of the area has been by way of blunting the angles of the triangle, or trimming off its sides, rather than by penetration of its interior.

In consolidations and combinations of carriers, decided July 11, 1907, 12 I. C. C. 277, a proceeding of investigation to which the Union Pacific and Southern Pacific were respondents, we considered, inter alia, the then existing relations between those companies, at the time under common control, and their relations with the subsidiaries of the former carrier, the Oregon Railroad & Navigation Company and Oregon Short Line Railroad Company. A map found at p. 279 of that report will show the then existing rail lines of the Union Pacific and Southern Pacific systems, and will show the undeveloped triangle to which we have referred. In the course of that report, we said (p. 286):

2792 In no other portion of the country is the Federal Government expending such large sums for purposes of development as in this great western region tributary to the Union Pacific and the Southern Pacific, and in no other part of the United States is the commerce of the country dependent upon so few railways covering so vast a territory and controlled by so few men; and in no part of the United States could such control have such far-reaching effect.

We concluded, among other (p. 304):

(1) * * * The credit of a railway company is founded upon the resources and prosperity of the country through which it runs. Its surplus funds and credit should be used for the betterment of its lines and in extensions and branches to develop the country contiguous to it. The testimony taken upon this hearing shows that about 50,000 square miles of territory in the State of Oregon, surrounded by the lines of the Oregon Short Line Railroad Company, the Oregon Railroad & Navigation Company, and the Southern Pacific Company, is not developed; while the funds of those companies which could be used for that purpose are being invested in stocks like the New York Central and other lines having only a remote relation to the territory in which the Union Pacific system is located.

Thereafter important changes in the situation were made during a series of years. The common control of the Union Pacific and Southern Pacific systems was terminated. See United States *v.* Union Pacific R. R. Co., 226 U. S. 61, 470. The District Court of the United States for the District of Utah entered its decree dismissing the complaint of the United States intended to sever the lines of the Southern Pacific Company and those of the Central Pacific Railway Company, then held under lease and control by stock ownership by the former company. United States *v.* Southern Pacific Co., 239 Fed. 998. On appeal to the United States Supreme Court, the decree of the District Court was reversed, and the Supreme Court directed that a decree be entered severing the control by the Southern Pacific of the Central Pacific by stock ownership or by lease. United States *v.* Southern Pacific Co., 259 U. S. 214. However, prior to the entry of the decree, in a proceeding pending before us under paragraph (2) of section 5 of the act, which had been enacted subsequent to the decree of dismissal in the District Court, we authorized acquisition of control by the Southern Pacific Company of the Central Pacific Company, by lease and stock ownership, upon certain terms and conditions. Control of Central Pacific by Southern Pacific, 76 I. C. C. 508. It is unnecessary to detail the facts shown in the opinions and reports cited, although they are appropriate for consideration in certain aspects of the proceedings before us. They are part of the history of the country, generally understood, and we mention them to show they have not been overlooked. In consequence, the Union Pacific and Southern Pacific, the latter embracing the Central Pacific lines, are now to be taken as competitors, and their control is separate.

Before the union of the two systems under one control was dissolved, certain important and far-reaching plans were devised, and in
2793 part executed, which if consummated, would have avoided the criticism contained in our report in consolidations and combinations of carriers, supra, and would doubtless have resulted in none of these proceedings being now before us. A number of important branch and feeder lines were constructed in Oregon, Idaho, and in California. Certain new construction of an important character was projected which would have served to create new main lines by the Union Pacific system: (a) A watergrade line from Blakes, near Huntington, down the Snake River to a connection at Lewiston, Idaho, with existing water-grade lines down the Snake and Columbia Rivers to tidewater. This line was completed to Homestead, about 58 miles, where construction stopped. (b) A line from Ontario to a point near Odell Lake. A part of this line was constructed by the Oregon-Washington and is operated by the Oregon Short Line. The constructed portion extends from the Snake River at Malheur Junction 2 miles south of Ontario, up the course of the Malheur River 124 miles to Crane, at the entrance of Harney Valley. We authorized the construction of a branch therefrom to Burns, in construction of extension by O.-W. R. R. & Nav. Co., 86 I. C. C. 264. Harriman, 4.5

miles west of Crane, while upon the Burns branch, is often taken in this record as if the end of the Malheur Valley branch. (c) A line from Weed, Calif., through Klamath Falls, northward and across the Cascade Mountains to a connection with the existing main line of the Southern Pacific Company, at Eugene, more particularly described later in this report. The project was undertaken by the Central Pacific and is commonly called the Natron cut-off. (d) A line to be constructed by the Des Chutes Railroad Company, one of the subsidiaries of the Union Pacific, from a connection with the main line of the Columbia River at the mouth of the Deschutes River, southerly, to a junction with the Natron cut-off, and also to join the east-and-west line from Ontario. The line was constructed as far as Bend, partly by the use of joint trackage, as will be shown.

Although not embraced within the territory directly involved, it is desirable to note that Coos Bay and Tillamook Bay were both connected with the main line of the Southern Pacific, and thereby access to the tidewater ports on those bays was given the territory served by the rail lines of that carrier, and access to the interior was afforded the products and imports of those ports.

Virtually coincidently with the dissolution of the common control of the Union Pacific and Southern Pacific systems and the institution of the suit to dissolve the control of the Central Pacific by the Southern Pacific, the development of the four projects first mentioned was halted at Homestead, Crane, Oakridge and Kirk, and Bend, respectively. The Union Pacific has no present plans for the extension of its lines beyond Homestead, Crane [or Harriman], or Bend, so far as the present record discloses. In construction of Natron cut-off by Central Pacific Ry., supra, decided August 15, 1923, division 4 authorized the construction by the Central Pacific of the uncompleted portion of the line between Oakridge and Kirk, and that project is now nearing completion.

In other important respects the transportation system has altered. To the lines serving California, the Western Pacific has been added; and the Union Pacific has now obtained direct access to terminals of its own in Puget Sound by trackage rights from Portland, jointly with the Northern Pacific and the Great Northern Railways. The coast
extension of the Chicago, Milwaukee & St. Paul has been com-
2794 pleted to the Puget Sound and Grays Harbor districts. More
important for present consideration: The Northern Pacific and Great Northern jointly acquired the Astoria & Columbia River Railroad from Portland to Astoria, and constructed a new line from Spokane by Pasco and the Columbia River route to Portland, through their subsidiary, Spokane, Portland & Seattle Railway. Through a subsidiary of the latter, the Oregon Electric Railway, which they acquired and extended, they now reach through Portland numerous Willamette Valley points as far south as Eugene and Corvallis. Another subsidiary, the Oregon Trunk Railway, was formed to build from a connection on the Columbia River south, up the Deschutes River, with the ultimate aim of extensions still further south, and with Cali-

fornia and her ports as a possible ultimate goal. A bitter building war ensued between the northern lines and the Union Pacific, then constructing its line to Bend, which finally was composed by the construction of certain joint track and with both lines stopping at Bend. See abandonment of part of line by Oregon Trunk, 72 I. C. C. 679, wherein division 4, on October 5, 1922, authorized the abandonment of certain portions of the Oregon Trunk's line, as further joint use of track with the Union Pacific had been arranged.

The independent lines of railway, not controlled by trunk lines, are small and unimportant. None of them are capable of development to serve central Oregon. The longest, existing at the time of our report in 1907, the Corvallis & Eastern, has since been absorbed by the Southern Pacific system. It was projected at an early day as an east-and-west line across Oregon, to follow the course later taken by the Union Pacific's branch from Ontario to Crane for a considerable distance, and thence a cross central Oregon and the Cascade Mountains, to a connection with a line which was constructed from near the foot of the western slope of the Cascades to Yaquina Bay. It was conceived on an ambitious scale, to operate with a steamer line from Yaquina Bay to San Francisco Bay. An inconsiderable amount of work was done on the eastern end, and the steamer line has long since disappeared while the line actually constructed now serves merely as branches for the Southern Pacific.

Another independent line of railway is an applicant before us in these proceedings, the Oregon, California & Eastern Railway Company, which in the last few years has built about 40 miles of track extending eastward and northeastward from Klamath Falls, terminating at the Sprague River.

The situation has thus markedly changed. The Puget Sound country, and interior Washington east thereof, have the added service afforded by the Milwaukee; interior Washington south of the sound has the service of the Union Pacific and the Great Northern, and the sound of the Union Pacific; Portland is reached from the East by the subsidiary of the Great Northern and Northern Pacific; San Francisco Bay has the added service of the Western Pacific. Into the great interior section described in our report in consolidations and combinations of carriers, supra, a number of lines of railway have been pushed toward the center, but none have crossed it. The area of the State of Oregon without rail transportation, estimated in 1907 as 50,000 square miles, has been reduced to about 33,000 square miles, which is approximately one-third the total area of the State but still remains the largest area in any of the United States not traversed by a railroad. This report deals with the
2795 attempt by the Oregon commission to secure the construction of an east-and-west line across the territory, and certain feeders, and the proposals of certain carriers for approval of their projects looking toward construction in this area.

On the other hand, the situation has remained the same as in 1907 in an important respect: South of Eugene, including the great

central plateau of Oregon and northern California and northern Nevada, a vast area is served only by the Southern Pacific and its affiliations and exclusive connections. We know of no other section of the United States of comparable area dependent upon a single rail carrier.

The Oregon Commission Complaint, No. 14392

While the Oregon commission seeks additional mileage for areas now inadequately supplied with railroads, its governing motive was to remedy the present rail situation by which the products of western Oregon reach eastern markets only by movement to the north and eastward over the lines of the Great Northern, Northern Pacific, or Chicago, Milwaukee & St. Paul, or by movement southward and eastward over the lines of the Southern Pacific and Union Pacific by way of Roseville, Calif., and Ogden, Utah, or the transcontinental lines still farther south. The proposed line between Oakridge and Crane would establish a route between western Oregon and Granger, Wyo., at least 420 miles shorter than the existing line of the Southern Pacific by way of Roseville and Ogden. This saving in distance would of course apply to all territory east of Granger reached by the route through that point. Similarly, the proposed connections between Bend, Kirk, and Lakeview, respectively, and the proposed cross-State line, in addition to their local value, were intended to be links in through routes to more distant territories. The Oregon commission also desires to increase the measure of competition between railroad carriers, both in eastern and western Oregon.

Two conditions must be satisfied before the issuance of an order such as the Oregon commission seeks, namely, (1) that the extensions are required in the public interest, and (2) that expenses incident thereto will not impair the ability of the affected carriers to perform their duties to the public. Cooke *v.* C. B. & Q. R. R. Co., 66 I. C. C. 452.

Some description of the territory involved is desirable, to serve as well in consideration of the finance applications. The territory equals the combined areas of Massachusetts, Connecticut, New Jersey, and Delaware. It is a plateau, more or less broken, at elevations that range between 4,100 and 4,700 feet above sea level with certain mountain ranges and peaks much higher. It is bounded on the east by the Blue, Cedar, and Stein's Mountains, and on the west by the Cascade Mountains. At the north it slopes steeply to elevations of between 100 and 300 feet at the Columbia River, and at the south extends into Nevada and California.

In the north, on the Blue Mountains and west, are large stands of western yellow pine timber, chiefly in forest reserves. In the center is a semi-arid region, roughly 75 miles each way, of waste land incapable of developing any substantial traffic, except the chemical

deposits of certain lakes. East and South of this waste area are productive districts and valleys, long noted for their produc-
2796 tion of live-stock. In the west, on the eastern slope of the Cascade Mountains, across the entire State, are vast stands of timber, chiefly yellow pine, and a number of agricultural areas capable of extensive development.

We have mentioned the penetration of this territory from the east by the branch of the Oregon-Washington, operated by the Oregon Short Line, from the Snake River to Harriman, 4.5 miles west of Crane, at the entrance of Harney Valley.

In the extreme south and about midway between the eastern and western boundaries of Oregon, at Lakeview is the northern terminus of the Nevada-California-Oregon, a narrow-gauge railroad operating through an agricultural and timber district from Wendel, Calif., on the Southern Pacific. It formerly reached the Western Pacific as well, but its line between Wendel and the Western Pacific connection has been abandoned so that the sole outlet for the carrier is the Southern Pacific. The Natron cut-off crosses the Cascades from Kirk, by Oakridge, to Eugene, is now approaching completion of construction by the Central Pacific, and will be operated under lease by the Southern Pacific to connect the Southern Pacific lines in western Oregon with the line through Klamath Falls to California.

Extension of the line of the Oregon-Washington from Crane to Burns is now proposed from Harriman to a connection with the Natron cut-off at a point called in this record Odell Junction. The Oregon commission proposes an extension from Bend to connect at Odell Junction, and a branch to Lakeview to diverge from the Harriman-Odell line at some point east of Odell Junction. The lengths of the various extensions sought are as stated below. They are claimed to constitute uncompleted parts of former projects, which have already been described in a general way.

Name	Single track (miles)
Natron cut-off (revised mileage)	110. 0
Harriman-Odell section	171. 0
Harriman-Burns branch	25. 0
Lakeview branch	104. 0
Bend-Odell section	52. 1

The only railroad the Southern Pacific specifically is called upon to construct is the Natron cut-off; and as that project is nearing its completion no mandate seems necessary or appropriate.

The construction of this gap was authorized by division 4 on August 15, 1923, in construction of Natron cut-off by Central Pacific Ry., supra. All of the capital stock of the Central Pacific except directors' qualifying shares, is owned by the Southern Pacific, and its lines are operated under lease as part of the Southern Pacific system. Construction began on September 1 ,1923, and completion is expected virtually by July 1, 1926, as specified in the report. The total cost for 110 miles of track (revised mileage) will equal about

$16,000,000. The high cost is due to the ruggedness of the country traversed. It will provide an alternative main route with the
2797 present line over the Siskiyou Mountains between California and Oregon. The authority was conferred without limiting the scope of the relief that may be granted in the instant proceeding.

The Oregon commission's complaint calls upon the Union Pacific system, as already described, to bear the construction of all the other extensions sought, under such conditions as to usage by other carriers, such as the Oregon Trunk, as may be found desirable. It is suggested that the proposed cross-State line would furnish a favorable alternative route of the Oregon-Washington with its present route over the Blue Mountains. The latter responds that such an alternative route should terminate at Portland and not at Eugene, 123 miles south of Portland, or at Oakridge or Odell Junction. The routing arrangements between the proposed cross-State line and connecting lines in western Oregon have vital bearing on the volume of traffic available for the former.

History of the projects

The construction sought is substantially that projected, surveyed, and partially performed between 1905 and 1912, under the joint control of the Harriman régime. Under arrangements between existing and the projected lines by which the latter had unqualified assurance of a large volume of the traffic known to be available, the practicability of the proposed lines was unquestioned. Traffic between western Oregon and points east was then routed over the Oregon-Washington by Portland instead of by Roseville and Ogden. It was anticipated that the construction of various contemplated feeder lines would congest the Portland terminals, which could be avoided by routing eastbound and westbound traffic over a line across the center of the State in sufficient volume to sustain it. A north-and-south line through Bend and Klamath Falls was also deemed essential.

The plan was then initiated, in contemplation of freely routing over these lines the traffic originated by any of the present and subsequent Southern Pacific and Oregon-Washington branches west of the Cascades and north of the Siskiyou Mountains. A line of railroad from Malheur Junction to Vale, Ore., commenced as an independent enterprise, was acquired and completed, and opened for operation in 1906. Construction westward from Vale and eastward from Natron, Ore., was begun in 1911, and the Deschutes line was completed as far as Bend in the same year. But upon the separation of the Union Pacific and Southern Pacific systems in 1912, with the Central Pacific having the title and possession of the Natron cut-off, and with an enforced separation of the Central from the Southern Pacific a possibility, work on the cross-State line from the Ontario end was suspended at Juntura in 1913. In 1915 the Malheur Valley line was extended to Riverside, and in 1916 to Crane, in the Harney Valley,

in order to encourage the development of that district. Work on the Natron cut-off was suspended in 1913. Stock ownership of the Central Pacific having been in the Southern Pacific, the Oregon-Washington was virtually denied access to the industries in Klamath county and western Oregon. The granting of the use of the Natron cut-off, urged by the Oregon commission, would partially eliminate this difficulty but would not solve the feeder line question in western Oregon for the Union Pacific, if thus admitted into the heart of the Willamette Valley.

Suggested alternative routes

2798 Interveners from Prineville advocate, in lieu of the Harriman-Odell extension, a line northwesterly from Burns along or across the Malhour and Ochoco forest reserves and down the Crooked River to Prineville, approximately 125 miles. There it would connect with the 19-mile branch line of railroad operated by the city of Prineville from the Deschutes line.

The record contains other suggestions, in opposition to the route sought by the Oregon commission. One is for the location of the line in a northwesterly direction from Burns to Bend just above the semi-arid region, thereby being in a position to draw freight tonnage in route from the timber resources of the Blue Mountains and Ochoco forest reserve and become self-sustained much earlier than a line farther south. The Southern Pacific calls attention to the old route of the Corvallis & Eastern, projected as already described, through Sisters, over a pass 55 miles north of Odell Lake, and thence down the Santiam River. But none of these alternative routes appear to meet the demands of the situation as well as the line proposed by the Oregon commission. However, they are worthy of further consideration in connection with future railroad development of Oregon.

Position taken by defendants

The Union Pacific and its affiliated lines admit the circuity of present routes between various parts of Oregon, and the existence of vast undeveloped resources, but deny that under existing circumstances of railroad ownership and control in western Oregon traffic would be available to produce adequate revenue for the separate operation and maintenance of any of this track that they may be required to construct. This assumes the termination of the east-and-west line at Odell Junction and the receipt from the Southern Pacific at the last-named point of only such traffic as the latter would be willing to divert to the Oregon-Washington.

These defendants also challenge the sufficiency of the complaint, in that it does not with certainty apprise them of the construction expected of each of them. Complainant has left to us the designation of the defendant which should construct each extension. It suggests that the Union Pacific system construct extensions from Harriman to Odell Junction, from Bend to Odell Junction, and the branch

from the former to Lakeview, and that the trackage between Odell Junction and Eugene and between Odell Junction and Klamath Falls might be brought under joint or common use, in order that through traffic might move freely between eastern and western Oregon and California.

The Southern Pacific opposes the use of the Natron cut-off by other roads.

To the statement of these defendants that such a line should terminate at Portland and not at Eugene, the suggestion is made for the use of the Oregon Electric Railway between Eugene and Portland. The latter parallels the Southern Pacific in the Willamette Valley, and affords a direct route. It is in great need of additional traffic.

2799 It is further contended by defendants that, if the part of the act relied on by complainant is construed as conferring upon us authority to require of defendants the construction, operation and maintenance of the extensions sought, it is unconstitutional and void, in violation of the fifth amendment.

The Oregon Trunk extends from a junction with the Spokane, Portland & Seattle at Fallbridge, Wash., to Bend. It is 151.9 miles long. It parallels the Des Chutes branch of the Oregon-Washington part of the way and has joint or common trackage rights the remainder of the distance. Upon oral argument of the Oregon commission case, it indicated its intention to make application to us for authority to extend its line to the south, and its application to that effect is considered later in this report. Unaided, the Oregon Trunk could not make the extension sought, but would have to depend upon its parent lines. During its existence it consistently has failed to earn its expenses and interest on its obligations. It has no bonded debt, and its capital investment is covered by stock and notes.

Preliminary considerations

Recognizing the necessity for through traffic pending the development of local traffic upon the lines proposed, the Union Pacific objects because it would have little assurance, under the plan suggested by the Oregon commission, of securing such traffic. Therefore the Oregon commission urges that we take whatever steps are necessary to see that the proposed development meets the necessities of the State. That a cross-State line may be successful, it must have a volume of through traffic from the vast stands of fir timber on and west of the Cascades, from the products of the rich Willamette Valley, and from the forest and agricultural products of the Klamath Falls district. Klamath Falls is second to Portland, of Oregon points, in the volume of traffic it originates. Its lumber shipments alone during 1923 amounted to 339,500,000 feet board measure. Even with joint or common use by the Oregon-Washington of the Natron cut-off, it would reach in its own name only Oakridge and Kirk, 46 miles from Eugene and 41 miles from Klamath Falls, respectively. Construction of connecting links for these distances

would be relatively light if joint use of tracks of the Southern Pacific or its subsidiaries to Eugene and Klamath Falls could not be obtained, but this would involve a duplication of facilities which all would depreciate. At these points interchange would be made with the Southern Pacific lines or the Oregon Electric. As the road that supplies the empty cars usually controls outbound routing of the traffic, without further arrangements, either voluntarily made or enforced under some mandate of the interstate commerce act, a cross-State line of the Oregon-Washington would have assurance of only a limited quantity of through traffic.

The various classes of traffic that might be anticipated by the proposed lines, the receipt of a large share or all of which they should have assurance, may be segregated as follows:

(*a*) Local traffic, from point to point on the lines.

(*b*) Traffic originating on the proposed lines but destined to points on other lines.

(*c*) Traffic originating at outside points and destined to points on these lines.

(*d*) Through, or so-called "bridge," traffic, received from and delivered to connections.

2800 The most important districts from and to which traffic would move over the lines, aside from western Oregon, are Puget Sound, the inland empire (particularly eastern Washington and northern Idaho), southern Idaho, Utah, and northern and central California, as well as transcontinental territory. Through Bend and Klamath Falls the route would be shorter between California and the inland empire than by Portland. Across the State and by Klamath Falls the route would be shorter between southern Idaho and central California than by Ogden.[3] The cross-State route over the Natron cut-off between Portland and transcontinental territory would have markedly more favorable grades than the present line of the Union Pacific system over the Blue Mountains in northeastern Oregon.

Idaho finds important markets for its live-stock at Portland and on Puget Sound, but needs as well the California markets. Decreasing the distance to San Francisco, as would follow the construction of the Harriman-Odell extension, would broaden the markets of producers throughout southwestern Idaho. California, with increasing population, finds greater need for the products of the interior, and conversely, for additional markets for its own products in the northwestern States of Oregon, Idaho, and Montana.

Car supply

During many periods in the history of Oregon, its industrial activity and development has been retarded by continually recurring severe

[3] The completion of the cut-off between Rogerson, Idaho, and Wells, Nev., authorized in public-convenience certificate to Idaho Central R. R., 70 I. C. C. 265, makes qualification necessary of this statement, based on the present record. Distances from southwestern Idaho to central California are 189 miles less by that cut-off than the route via Ogden, and slightly less than the distances over the proposed Harriman-Odell extension. This cut-off may lessen the necessity of a line across Oregon, dependent upon the extent of its use.

car shortages. The commercial prosperity of the State is so dependent upon the marketing of its products that it quickly responds to any slackening in movement. The lack of effective rail competition, previously mentioned, accentuates this situation. Except for the Oregon Electric, the Southern Pacific is without railroad competition in all western Oregon south of Portland. The Oregon-Washington predominates in northern and northeastern Oregon. Complainant is extremely desirous that the Union Pacific lines shall enter the southern Willamette Valley, that the resulting competition and increase supply of empty cars may stimulate the development of that section as well as of eastern Oregon.

As the Southern Pacific originates the great part of the outgoing traffic of western Oregon, shippers there are dependent upon that road for their supply of empty cars. Thus the Southern Pacific largely controls the routing of the business. Empty cars move by California junctions and north over the 3.3 per cent grade in the Siskiyou Mountains, and outgoing transcontinental traffic moves in the reverse direction, a haul of from 325 to 600 miles greater each way than the distance directly across Oregon on the route proposed. During nearly every year for the past two decades the State has suffered a shortage of cars at critical times, so that its industries have been forced to curtail operations when the demand for their products has been the greatest. There were severe car shortages during 1903, 1904, 1905, and 1906. Conditions were more favorable thence until 1916, when they became worse largely in consequence of the movement of traffic to the Atlantic seaboard for European war purposes. Subsequent periods of car shortage have been from August, 1917, to October, 1918, from September, 1919, to December, 1920, from July, 1922, to January 1923, during which time a shopmen's strike
2801 occurred, and from April to November, 1923. The shortage in 1920 amounted to 2,400 cars. There were serious labor disturbances on the lines of the Southern Pacific and Union Pacific during the joint control which were not existent upon other lines in the Pacific northwest.

This condition generally is worse in the Willamette Valley than in adjacent States. The small lumber millers suffer more acutely than do the large producers. One of the main causes of the difficulty, as admitted by the assistant general manager of the Southern Pacific, sand as amply corroborated by witnesses for the shippers, is that (by that line) "Oregon is very remote from the center of consumption and is the hardest coutry in America to get empties into" and "the capacity of the track over the Siskiyou Mountains is not great and never will be because of the severe operating conditions." The Natron cut-off will mitigate, but cannot entirely avoid the recurrence of conditions of this character. The construction of the proposed cross-State line, it is said, would greatly relieve car shortages by the avoidance of the long haul by California points and by making available the supply of cars of the Union Pacific system. Such relief would be dependent upon the volume of traffic interchanged between

the carriers at Odell Junction or at Eugene and Klamath Falls. During the last quarter of 1922, of the Spokane, Portland & Seattle, the Oregon Short Line, the Oregon-Washington, the Great Northern and the Southern Pacific, the last named was the lowest in percentage of empty cars supplied to those ordered. Shippers of lumber and other commodities in the State of Washington seldom experience car shortages as severe as those met in the Willamette Valley. They enjoy greater carrier competition, and in most instances have available the empty cars of more than one system. The marketing of Oregon timber is languishing in comparison with that of Washington and California. The reason, as stated by an experienced witness, is that operators who contemplate the erection of mills find no carrier competition in Oregon and go to Washington, where there are more railroads and an ample supply of equipment in which to move the output. Thus they are in a better position to profit when lumber commands a premium in middle western and eastern markets. Nevertheless, the traffic carried by the Southern Pacific on its Oregon lines has shown marked increase.

Potential and probable traffic

Painstaking estimates as to the amount of traffic potentially and probably available have been made and submitted by the parties. In important instances they are in conflict which can only be reconciled by remembering that they are at best but estimates, with many problematical factors and variables upon which judgments may well differ. It is not necessary for us to attempt to weigh and reconcile, or if unreconcilable, determine each item in the estimates. But it will be desirable, both to aid in consideration of the Oregon Commission's complaint and in the finance docket applications later
2802 discussed, to examine and state in a very general way the nature of the traffic which may be available in the affected territory. In response to a resolution of the Senate, on February 4, 1924, we made a report, Transportation Facilities in Northwest Pacific States, 87 I. C. C. 472, which gave in some detail the results of a survey of the traffic of the Northwest Pacific-slope States.

In the hearing upon the Oregon commission's complaint, the affected territory is taken as that part of the State, except the southeastern corner, which is south of an irregular line crossing the Willamette Valley approximately 30 miles south of Portland, and eastern Oregon through Canyon City.

It is asserted that the effects of traffic movement to and from this territory over the Natron cut-off would be a concentration of population around Eugene as a center, an increase in land values, and a transformation of agricultural industry from hay and grain growing to the production of higher-valued crops and to dairying. The counties traversed are Malheur, Harney, Lake, Klamath, Crook, and Deschutes. Their population, as shown by the census reports, and that of the State of Oregon, was as follows:

County	1900	1910	1920	Per square mile, 1920
Malheur	4,302	8,601	10,907	1.1
Harney	2,593	4,095	3,992	0.4
Lake	2,847	4,658	3,491	0.5
Klamath	3,970	8,554	11,413	1.9
Crook	Boundaries changed		3,424	1.2
Deschutes	Organized 1916		9,622	3.1
Entire State	413,536	672,765	783,389	8.2

The difference in general climatic conditions and in altitude makes the sections of Oregon east and west of the Cascade Mountains entirely unlike in character, especially as the country recedes from the mountain range. These conditions have profoundly influenced the population and economy of eastern Oregon. As we might expect in a semiarid country at high elevation, we find livestock raising a predominating industry, with agriculture limited by the supply of water, and therefore ranging from the sparse and hardy grains of the dry-land farmer to the profuse and diversified products of the irrigationist in the favored valley. These conditions prevail throughout much of the territory here considered. There can be no large cities in such territory under usual circumstances, especially in the absence of adequate transportation. Bend, with a population of 8,000, which has chiefly come to it with the lumber industry, is the largest municipality in the territory under consideration. Access to large markets where the livestock, or the bulky low grade or specialty agricultural products, can be transported at favorable transportation costs, is the life of the community.

The counties are large and the distances great. There is much rough land, which, however, finds its use in large part as pasturage and grazing ground for livestock. To counterbalance this wastage, the valleys are often of considerable extent and of extraordinary fertility. There is more water available for irrigation than has yet been utilized, although the area of irrigated land has increased
2803 progressively. It is, of course, not feasible to develop a source of irrigation water and to apply it to the reclamation of land at heavy expense, unless markets for the crops raised can be assured within practicable reach of the producer.

In eastern Oregon, with adjacent protions of the States of California, Nevada, and Idaho, we therefore find important sources of supply of livestock, more especially of cattle, sheep, and horses. Wool from this section is an important source of the Nation's supply, and finds its market on both coasts. The dairy industry has shown growth, limited in part by the availability of the markets in California and upon the north Pacific coast. Evidently the sugar-beet industry is capable of development. Potatoes and other vegetables from the large and highly developed irrigated sections of Idaho find ready market. Hay is produced in profusion; but its production must be limited by the use to be made of it locally, in the absence of railroad transportation to other capable consuming markets. Wheat and the coarse grains are produced in quantities varying with the soil and cli-

matic conditions. Livestock goes long distances to the market on its own feet, but this is relatively expensive, and involves shrinkage in quantity and quality which is reflected in the price received. Herds of feeder cattle might be brought in by suitable rail transportation, which would consume locally grown products and encourage development. At the risk of repetition, we may say it is clear that the principal markets for the present and prospective products of agriculture, including livestock, of the portions of the States mentioned, must be found in the much more densely settled western slope of the States of Oregon, Washington, and northern California and markets reached through the ports and gateways of the western slope.

The mineral resources are very limited. Extensive deposits of sodium carbonate are contained in Alkali Lake, 18 miles south of the proposed cross-State line, in the eastern part of Lake County. Much is said as to the inexhaustibility of the supply of this product and its unequalled purity. The product is evidently of great value when markets can be reached with good transportation. Substantial financial interests stand ready to develop the project when transportation is assured. Silicate of soda is named as another product which could be produced in south-central Oregon in quantity.

The traffic which most certainly would be afforded in large volume immediately and for a long period in the future, is the products of forests. The timber resources of the general section involved are great. In the near-by States of Washington and California, the rate of cutting has been greater, and with the diminution of the available supply from the Southern States, the supply of standing timber in Oregon must be looked to by the whole country as of increasing and prime importance.

The State contains 21.6 per cent of the standing timber of the United States, 80 per cent of which is west of the Cascade Mountains. Of the total in the State, 70 per cent, or 350,000,000,000 feet, is tributary to the Southern Pacific lines—320,000,000,000 feet west of the Cascades and 30,000,000,000 feet in the Klamath Basin; a large proportion of this timber, enormous in its aggregate, is the property of the Nation. It is administered under conditions designed to secure the continuance of the supply steadily for generations. The threat-

2804 ened diminution in the available supply of southern pine has resulted in increasing reliance being placed by the country upon the timber of the Pacific coast. It is estimated that within 10 years 11,000,000,000 feet more per annum than is now produced will have to come from the Pacific coast. With 43 per cent of the stand, Oregon's share of the increase will be close to 5,000,000,000 feet. Thus the present output of 3,500,000,000 feet per year, or 140,000 carloads, may reasonably be increased to 8,500,000,000 feet, or 340,000 carloads.[4]

Of the 50,000,000,000 feet assigned to the territory east of the Cascades, the principal tracts are in the Klamath Basin and in terri-

[4] This volume of traffic is stated to be in excess of the carrying capacity of the existing lines over the Siskiyou mountains, which would be called upon to handle most of it, inasmuch as the Southern Pacific now is the only road in the southwestern part of the State. As that road would be expected to supply the empty cars, only a small part of this traffic would move by Portland over the Columbia River routes.

tories tributary to Lakeview and Bend. The testimony as to the amounts in these several territories is conflicting, but according to the record as a whole the amount that may be considered tributary to Klamath Falls is approximately 24,000,000,000 feet, tributary to Lakeview about 3,000,000,000 feet, and tributary to the Deschutes River lines about 14,000,000,000 feet. There are other forests in eastern Oregon which have resources considerable in themselves, but relatively small as compared with the tracts in the western half of the State to which reference has been made. These figures do not include about 5,500,000,000 feet south of Oregon, tributary to the proposed lines. The entire eastern slope of the Cascade Mountains reaching to Lakeview on the south, is heavily timbered, and large stands would be tributary to the eastern end of the cross-State line.

But the large stands on the north are more accessible from the proposed extension southward from Bend to the Natron cut-off. Any additional traffic to or from territory on the south or over the Cascades on the west would have to be interchanged with the road operating the Natron cut-off, in the absence of arrangements for through movement. Both this section of the proposed cross-State line and the Natron cut-off, while partly in mountainous territory, are capable of originating considerable traffic in forest products. The proposed line from Bend southward to the Natron cut-off would be almost wholly through forested territory, perhaps the finest body of standing pine timber in the world. Two large mills now in operation at Bend draw their supply of logs from large adjacent timber areas controlled by them.

The best expert opinion points to a heavy increase in the volume of shipments of lumber from the north Pacific coast to meet which an adequate transportation machine is imperative. The public interest in this comprises the individual producers, and their consuming customers in other sections; the State, which finds in lumber its principal industry; and the Federal Government, as the proprietor of national forests which contain more than 130,000,000,000 feet of standing timber.[5]

The national forest reserves in western Oregon contain timber estimated at 91,600,000,000 feet, and those in eastern Oregon 47,000,000,000 feet. Roughly, 80 per cent of that in western Oregon and 50 per cent of that in eastern Oregon would be accessible by logging roads from the proposed extensions and existing lines in southwestern Oregon.

2805 The privately owned forest lands in western Oregon contain approximately 110,000,000,000 feet of standing timber, mainly fir. Those in eastern Oregon, contain approximately 29,510,000,000 feet, mainly pine. A large proportion, estimated at 24 per cent, for the State is mature and will deteriorate rapidly. Much destruction is caused by forest fires.

As summarized by complainant, in the entire south-central and southeastern sections of Oregon, there are 533,000 acres of land now

[5] A statement by the Chief of the United States Forestry Service, of record, is pertinent.

under irrigation, 613,000 acres are proposed for irrigation, and 327,340 acres of swamp land can be reclaimed. Heretofore, stock-raising has been the chief industry of this part of the State, but upon the construction of adequate transportation the stimulus to more extensive development of diversified farming is expected to produce a variety of outgoing tonnage.

Defendants' list of productive agricultural areas in Harney and Lake Counties directly tributary to the projects differs from that of complainant as to the lands included. The following is defendants' summary of lands capable of being developed under controlled irrigation, apart from that served by overflow from streams, on the assumption that sufficient water is available:

Districts	Acres		Acres cultivated	
	Irrigable	Irrigated	Irrigated	Dry farmed
Harney Valley	77,000	42,000	6,000	(?)
Silver Creek	16,000	4,000	800	(?)
Blitzen	34,000	20,000	1,100	(?)
Fort Rock	33,180			25,000
Silver Lake	16,800	1,500	1,500	(?)
Summer Lake	7,179	1,860	860	2,601
Chewaucan Valley	38,364	24,300	1,500	4,000
Goose Lake Valley	62,500	37,500	15,000	(?)
Walker Basin	8,400	120	120	(?)
	293,423	131,280	26,880	(?)

This acreage has been separated as to railroad extensions as stated below:

Line	Acres		Acres cultivated	
	Irrigable	Irrigated	Irrigated	Dry farmed
Harriman-Burns	77,000	42,000	6,000	(?)
Harriman-Odell	107,159	27,360	4,260	(?)
Lakeview	100,864	61,800	16,500	(?)
Bend-Odell	8,400	120	120	(?)

Our present yearly cut from these Government properties is 137,000,000 feet of timber. The yearly cut from the national forests of Oregon could properly be increased to ten or twelve times the present amount, while still insuring the unimpaired perpetuation of the resource and utilizing only its current annual growth. It would be desirable from every standpoint to bring the cut from the national forests up to that amount, to utilize old virgin timber that is now deteriorating from decay to increase public revenue for the Nation and State, and to afford an additional supply of forest products for the markets of the country. The possibility of increasing the cut from the national forests depends to a considerable degree upon the enlargement of rail facilities. To this extent the Government has a direct interest in the matter. The predominant consideration, however, in my judgment, should be the fact that the dependence of the entire country for softwood timber is rapidly shifting to the west coast, and that its existing rail facilities are inadequate to meet this growing demand.

2806 In Malheur, Harney, Lake Klamath, Crook, and Deschutes Counties, approximately $5,550,000 has been expended upon highways to make the productive localities accessible. To complete the State highways already laid out, the expenditure of $5,700,000 will be necessary. The total, between $11,000,000 and $12,000,000, does not include expenditures by the counties for so-called county

roads. The highway development is recent and not yet comprehensive in extent of ramifications. While certain of these important trunk lines, such as the highway paralleling the proposed Deschutes Valley extension to Klamath Falls, will aid in the development of interior Oregon, they can not take the place of railways in affording the long distance transportation which the products of central Oregon require if the country is to grow and prosper.

The eastern slope of the Cascades from Klamath Falls to Bend possesses possibilities of development from a recreational standpoint, with its many beautiful lakes, rugged mountains and other scenic attractions, and a very favorable climate.

The agricultural and horticultural possibilities of the Willamette Valley and western Oregon generally are well understood. According to data assembled and published by the Southern Pacific in 1923, only one-third of western Oregon is in cultivation. The dairying industry has reached a high state of development. A large amount of leguminous feed from central and eastern Oregon is needed. The tendency is toward the production of the high valued crops, which will force the use of the central and eastern Oregon crops of hay and grain, if available. The vegetables and ripe fruits of the central portion of western Oregon are handicapped in the eastern markets by the superior transportation given their California competitors, amounting to two days in transit. Both the soil and climate of western Oregon are favorable to the intensive production of high-class commodities, such as fruits, nuts, vegetables, berries, vine crops, poultry, eggs, and dairy products. Over 75 per cent of the orchard and dairy output of western Oregon is shipped to points east of the Rocky Mountains, largely in competition with California products. Direct and expeditious service is essential to the development of this section equally with competitive producing districts in California and Washington.

In the southwestern counties of Oregon are 180,000,000,000 feet of standing timber, chiefly fir, 56,000,000,000 feet of which are under Federal ownership. A large part of this, upon the construction of tap lines, could move as regular traffic over a direct route across central Oregon to middle western and eastern markets, if given equal car supply and rates with other routes. The National Government has authorized the sale of large stands in remote districts, sometimes with the provision that a substantial part of the sale price shall be devoted to the construction of common carrier railroads for general development of the district.

At the hearing upon the Oregon commission's complaint, the traffic possibilities to and from southern Idaho were discussed at length. That State possesses highly developed large irrigation possibilities, and because of its inland situation and distance from great consuming centers, is keenly interested in adequate and eco-
2807 nomical transportation. California presents one of its important markets, especially for surplus products. A reduction in the rail distance to California markets would doubtless stimulate the movement of these agricultural products and would be of material

aid to the agricultural and livestock industries of that State. The construction of the Rogerson-Wells cut-off will bring the Idaho Falls and Twin Falls districts closer to San Francisco by that route than they would be over the proposed cross-State line; from other districts the disparity between the distances by Wells and by the cross-State line proposed are not great, relatively to the entire hauls involved.

The Oregon commission directs attention to the adequacy of the ports of Portland and Coos Bay, which have been developed at great expense, and which afford marked possibilities for expansion of the already important coastal, intercoastal, and foreign commerce passing through them. A cross-State line would be of much service, under favorable traffic arrangements, in the development of these functions of the ports named, and particularly of Coos Bay.

Complainant's traffic estimates

The volume of the principal traffic expected by complainant to originate in Oregon and move over the desired lines is shown below:

Commodity	Annually, first 5 years	Annually, after 5 years	Movement
Dairy feeds	100,000 tons	140,000 tons	From eastern Oregon to Willamette Valley.
Hay	450,000 tons	630,000 tons	From eastern Oregon to Willamette Valley.
Livestock	120,000 sheep	150,000 sheep	From eastern Oregon to coast markets.
	45,000 hogs	56,250 hogs	
	20,000 cattle	25,000 cattle	
Wool	750 tons	1,000 tons	From eastern and central Oregon.
Prunes	7,312 tons	14,264 tons	Eastward.
Cherries	22 carloads	88 carloads	Eastward.
Canned goods	633 carloads	791 carloads	Eastward.
Walnuts	92 tons	118 tons	Eastward.
Lumber:			
Fir	690,000,000 ft	862,000,000 ft	Eastward.
Pine	396,500,000 ft	495,000,000 ft	Eastward.
Dairy products	(1)	(1)	Eastward.
L. c. l. freight	(1)	(1)	Both directions.

[1] Not estimated.

Chemical products from eastern Oregon, fuel oil or supplies, shipments of broccoli and perhaps other perishable vegetables, and manufactured products, are not included in the estimate.

The foregoing statistics constitute an average of approximately 93,000 carloads of traffic annually during the first 5 years. They contemplate and are predicated upon a freedom of opportunity of development of business in western Oregon by the Oregon-
2808 Washington and a substantial share of that which may originate on existing Southern Pacific lines. Conservatism is claimed for this estimate. Individual witnesses make estimates of the probable average annual tonnage available for these projects which aggregate 2,946,203 tons, or 47.3 per cent more than complainant's estimates.

No estimate is made of the probable through traffic from California to Idaho by Odell Junction, or between California and the Inland Empire by Klamath Falls and Bend.

Certain other traffic, as that for export, has not been included in the estimates. While these omissions make for conservatism in the estimates submitted, the present and future validity of the estimates is seriously discounted by (1) the approaching completion of the Natron cut-off, (2) the completion of the Rogerson-Wells cut-off, and (3) the growth of transcontinental business through the Panama Canal, and may be further impaired should we authorize the relief sought in any or all of the finance dockets presently to be considered. As the Oregon commission complaint case was heard and submitted before any of the finance docket applications were made, this implies no criticism of the testimony, but the fact makes it unnecessary and undesirable to analyze the estimate submitted with greater completeness.

Defendants' estimates. Defendant Oregon-Washington bases its opinion that the agricultural development on which complainant's traffic estimates are predicted would not progress as rapidly as anticipated by complainant, upon the history of the development of other promising irrigation enterprises. The complainant's estimates have been subjected to a searching analysis in the record made by defendants. What has been said as to the validity of the complainant's estimates applies with like force to those submitted by the defendants.

The Oregon-Washington states that its present traffic from and to Portland and western Oregon is less than at the time of the Union Pacific-Southern Pacific dissolution. This is due partly to the change of relationship between this road and the originating lines south of Portland. The Southern Pacific, as the originator of traffic in western Oregon, retains the long haul whenever practicable. Other causes are canal competition, and perhaps inadequate extensions into promising territory. Nevertheless the traffic density of the Oregon-Washington in 1922 was the greatest of any transcontinental line in the Pacific northwest, despite its difficult grades over the Blue Mountains.

The Oregon-Washington contends that much of the 30,000,000,000 feet of merchantable timber on the eastern slopes of the Cascades between Bend and the California-Oregon State line is now accessible by logging roads from Klamath Falls, Bend, or points on the Natron cut-off without additional lines. It concedes that a north-and-south line between Bend and Lakeview, properly located to serve the timber and agricultural areas, is more deserving of consideration than a cross-state extension, under present conditions of ownership of lines in western Oregon. As the traffic on the Deschutes branch now preponderates in the northerly direction, substantial movements in the opposite direction to Lakeview and through Klamath Falls would partly balance the empty-car movement.

The proposed cross-State line is opposed by the Oregon-Washington as a waste of capital, on the grounds that it would not be self-supporting under existing circumstances of railroad ownership in western
2809 Oregon and because of difficulties of operation crossing the 75-mile semiarid region. The present population within 20 miles on each side of all the proposed extensions, excluding Bend, is approximately 7,500 persons. There is no town with over 200 persons within 10 miles of these lines, excepting Bend and Lakeview.

The Southern Pacific is said to be so strongly entrenched in western Oregon, with its main lines and branches reaching the districts where traffic originates or is delivered, that a cross-State line under different ownership would expect little traffic from that section. Articles such as canned goods, fruits, etc., which originate at points in the Willamette Valley nearer Portland than Eugene, such as Salem, can more advantageously move eastward over the present main line of the Oregon-Washington rather than by Odell Junction and a cross-State line. Oregon-Washington's main line, it is claimed, has a capacity for much heavier traffic than it now receives.

It is claimed that, when need arises for improved transportation between the Nampa district and San Francisco, the construction of an additional 44-mile cut-off from Glenn's Ferry, Idaho, to Buhl, Idaho, will furnish a route in connection with the Rogerson-Wells cut-off substantially equidistant with a route across Oregon via Odell Junction, over highly improved railroads, with advantageous grades and better service.

In short, the Oregon-Washington takes the position that the only way a cross-State line could sustain itself would be to restore the relationship of railroads to the several districts that existed prior to the dissolution of the Union Pacific and Southern Pacific systems, whereby the traffic from or to western Oregon north of the Siskiyou Mountains would become available for routing across the State. Eugene, as a key point in the greater development of western Oregon, is the radiating point of numerous main and branch line railways. But, with the exception of the Oregon Electric, all are now included in the Southern Pacific system, with outlets to the south only.

The traffic estimates of the Oregon-Washington, under the limitations before discussed, are as follows:

Line	First	Second	Tons per year		
			Third	Fourth	Fifth
Harriman-Odell, outbound	41, 769	44, 308	45, 030	45, 849	46, 625
Do inbound	3, 916	4, 320	5, 144	5, 845	6, 890
Total	45, 685	48, 628	50, 174	51, 694	53, 515
Lakeview, outbound	50, 924	49, 834	51, 198	52, 181	53, 168
Do inbound	4, 580	4, 902	5, 556	6, 067	6, 730
Total	55, 504	54, 736	56, 754	58, 248	59, 898
Bend-Odell, outbound	17, 239	17, 249	18, 912	20, 711	22, 756
Do inbound	580	623	775	760	812
Total	17, 819	17, 872	19, 687	21, 471	23, 568

No tonnage from Alkali Lake has been included in the above data.

2810 Probable railway operating revenues

The considerations which have been shown to make the estimates as to the probable traffic unreliable as guides in the present inquiry likewise impair the estimates submitted as to the probable operating revenues of the lines sought by the Oregon commission. The Oregon commission's estimate of the average annual revenue contemplated during the first five years, with certain traffic omitted as previously stated, is as follows:

Traffic		Probable revenue
Outbound, originating on lines	2,000,354 tons	$2,549,204
Inbound, destined to lines	132,900 "	320,355
Through:		
Idaho to California	71,458 "	256,245
Other	57,758 "	397,895
	2,262,470 "	3,523,699
Passenger traffic revenue:		
15% of freight revenue		52,855
Total		3,586,554
Per mile of road, 331.7 miles		10,813

These estimates, based on tonnage statistics assailed by defendants, are similarly characterized as excessive. They are said to make insufficient allowance for different ownership of lines and for the lawful rights of originating carriers. Movement of certain named commodities is claimed to be unlikely.

The Oregon-Washington has similarly applied current rates in this territory to its estimates of probable traffic, and arrives at the following range of operating revenues for the first five years.

Extension	Operating revenues	
	First year	Fifth year
Harriman-Odell	$328,988	$456,878
Lakeview	110,143	136,813
Bend-Odell	70,080	114,233
	509,211	707,924
Per mile of road, 331.7 miles	1,535	2,134

For comparison, the average operating revenue per mile of road, main and branch, of each of the following lines during 1923, is stated below.

Oregon-Washington	$13,492
Oregon Short Line	16,386
Union Pacific	31,676
Southern Pacific, Pacific system	27,890
Southern Pacific lines in Oregon	16,263
Great Northern	14,547
Spokane, Portland & Seattle	15,695

2811 Cost of construction

Approximately 80 per cent of the length of the Harriman-Odell extension would be light construction, and the remainder fairly heavy. The Lakeview branch would be somewhat more expensive than the other extensions. The Bend-Odell extension would be light construction. A logging road of standard construction, serving the mills at Bend, already extends about 27 miles of this distance.

Complainants' estimates of the probable cost of these projects are presented below.

Extension	Length (miles)	Estimated cost	Cost per mile
Harriman-Odell	171.0	$8,318,842	$48,643
Lakeview	104.0	5,369,077	51,625
Bend-Odell jct	52.1	2,129,643	40,876
	327.1	15,817,562	48,357
Tools and roadway machinery		32,662	86
		15,850,224	48,443

The last-named item, apparently omitted, has been added at the suggestion of the defendants.

A subsequent revision of the plans of the Natron cut-off reduces its length to 110 miles and locates the so-called Odell junction 18 miles west of its former proposed site, near Crescent Lake. This will have the effect of increasing the proposed Harriman-Odell section this distance, and the proposed Bend-Odell section, 12 miles. For convenience, the designation "Odell junction" or "Odell" will be continued throughout this report, regardless of the precise location or future name of this junction point.

The estimates on which the defendants rely are stated below.

Extension	Distance (miles)	Estimated cost	Cost per mile
Harriman-Odell	188.9	$10,436,916	$55,251
Lakeview	78.7	4,868,518	61,862
Bend-Odell	64.1	3,151,150	49,160
	331.7	18,456,584	55,642

The estimates of both parties are exclusive of working capital, such as cash and current supplies. Rolling stock of a probable cost of $2,518,800, included in defendants' estimate, has been taken out for comparison.

The mean of the two estimates, slightly under $17,250,000 or $52,000 per mile, may be taken as a sufficiently reliable forecast of the probable cost for present purposes. Confirmation of the $52,000 estimate as an average is had by the fact that this was the cost per mile of building the first 30 miles of the Natron cut-off northward from Kirk over substantially similar terrain. Some sections of the cut-off will not exceed $49,000 per mile.

2812

Probable operating expenses

Complainant and defendants have submitted carefully prepared estimates of the operating expenses over the lines proposed by the Oregon commission. Necessarily these estimates are problematical. For reasons stated in the previous discussion of the probable volume of traffic, it is not desirable to follow the parties into a minute analysis of their claims, or to attempt to reconcile their differences.

Complainant estimates the average annual operating expenses of these extensions for the first 5 years as shown below.

Item	Amount
Maintenance of way and structures	$258, 400
Maintenance of equipment	830, 000
Traffic expenses	57, 300
Transportation	1, 366, 700
Miscellaneous operations	
General expenses	138, 700
Total	2, 662, 000
Per mile of road	5, 025

Taxes should run about $900 a mile, annually.

Defendants' estimate of probable annual operating expenses of these extensions, based on their anticipated volume of traffic, is as follows:

Extension	Operating expenses	Railway tax accruals	Equipment rents, dr.	Total
Harriman-Odell	$851, 308	$69, 215	$101, 353	$1, 021, 876
Lakeview	356, 065	28, 130	42, 526	426, 721
Bend-Odell	278, 434	36, 599	32, 564	347, 597
	1, 485, 807	133, 944	176, 443	1, 796, 194

These estimates are based largely on past operations of the Des Chutes branch.

Operating results

If the conditions as outlined by complainant were realized, the traffic over these extensions would produce annual revenue of $11,000 per mile of road at an expense for operation, taxes, and uncollectible revenue of $9,335 per mile of road. This would result in a yield of $1,665 annually on an investment of $52,000 per mile, equal to 3.2 per cent.

Defendants' estimates, under the limitations of ownership before discussed, would result in operating deficit ranging between the figures set out below.

Extension	Operating deficits	
	First year	Fifth year
Harriman-Odell	$602, 887	$564, 997
Lakeview	316, 577	290, 207
Bend-Odell	277, 517	233, 363
	1, 286, 981	1, 088, 567

On this basis, at the end of 5 years the operating deficit would equal $5,975,122, or, including a 6 per cent return on the investment, the sum of $12,267,771.

2813 Defendants Oregon-Washington and Oregon Short Line assert that without the endorsement of the dominant line, the Union Pacific, they would experience difficulty in financing the construction of these projects, as their operations during the past few years have been unsatisfactory. Allowing for bond interest, the Oregon-Washington operated at a loss of between one and five million dollars annually during 1921, 1922, and 1923. The Oregon Short Line states that the return on its investment during the same years did not exceed between 4 and 5 per cent. It is questionable whether the three years afford a suitable basis for estimation of the future, because of abnormal economic conditions which prevailed during a considerable part of the period. The Public Utilities Commission of Idaho shows that for the period from July 1, 1896, to December 31, 1922, inclusive, the net earnings of this road totaled $190,541,890. A return of 5¾ per cent on the investment shown on its books is computed at $125,528,601, leaving earnings amounting to $65,013,289.

A comparison of operating ratios of the roads named below for 1922 may be of interest.

Name of the road:	Per cent
Oregon-Washington Railroad & Navigation Co	93. 82
Oregon Short Line	72. 43
Southern Pacific, Pacific system	70. 65
Union Pacific	68. 55
Spokane, Portland & Seattle	63. 79

There is no question raised as to the financial strength, or successful operating results of the Union Pacific, either the parent line or as a system.

Finance docket applications

Finance Docket No. 4730. Application of Oregon, California & Eastern Ry. Co.

The above-numbered application was the first of the series to be filed with us. As has been stated, this company now has in operation about 40 miles of line, extending eastward and northeastward from Klamath Falls, terminating at Sprague River. It seeks authority for the construction of a line extending from Sprague River in a northeasterly direction about 66 miles to Silver Lake; a line branching from the Silver Lake line at a point about 20 miles from Sprague River and extending in a northwesterly direction about 15 miles along the Williamson River, and a third line extending from Sprague River in a southeasterly direction about 79 miles to Lakeview. These distances, based upon engineering investigation, vary somewhat from those given in the applications. The purpose of all of these proposed lines, like that of the line already in operation, is principally to reach tracts of timber. The Silver Lake line extends through a timber tract and terminates in an open country, utilizable for pasturage. It is estimated that the total cost of the proposed lines, exclusive of equip-

ment, will be $4,581,140. The tracks are to be laid with 75-pound rail, and it is expected that the lines will be completed within three years. From the application, which gives estimates of the traffic and revenues expected from operation of the proposed lines, together with that of the existing line, it appears that, while the lines might not yield a fair return upon the investment as separately operated properties, they would nevertheless be profitable as feeders for a larger
2814–2815 system affording a long haul for the traffic originated.

It is asserted by some witnesses that the logs produced on the line of the Oregon, California & Eastern will be hauled to Klamath Falls for milling. Other witnesses assert that mills will be constructed at other points, thus avoiding the uneconomical haul of logs. It is estimated that the available timber traffic will afford tonnage for a period of at least twenty to twenty-five years, but its duration will depend to some extent upon the practices as to selection and conservation. About one-half of the timber in the Klamath Basin is on Indian reservations or in Government forest reserves.

Finance Docket No. 4810. Application of Oregon Trunk Railway

The second application of the series was filed by the Oregon Trunk Railway, a subsidiary of the Great Northern and Northern Pacific. It requests authority to construct and operate a line from Bend southwesterly about 65 miles to Paunina, on the Natron cut-off about midway between Kirk and Oakridge, and thence to Klamath Falls. The applicant sought an arrangement with the Southern Pacific whereby it might operate jointly with that company the section of the Natron cut-off between Paunina and Klamath Falls. The Southern Pacific declined to enter into the proposed arrangement, and the Oregon Trunk changed its plan, and proposes the construction of an additional line between Paunina and Klamath Falls, running at some distance to the eastward of the Natron cut-off, passing through Bonanza, and practically parallelling the existing line of the Oregon, California & Eastern and its proposed extension along the Williamson River. The total length of the line thus proposed from Bend to Klamath Falls is about 178 miles. The applicant estimated its cost to be about $6,500,000, but other applicants deemed this estimate too low. The new construction proposed is through territory offering no serious physical difficulties. Construction is to be finished by the end of the second summer after the start, and is to be financed by the proprietary companies without the issuance of securities other than notes.

The motive of the applicant stated is to secure access to the lumber traffic, present and future, of the Klamath Basin, and thus to anticipate and defer exhaustion of the timber tributary to its present line, to secure additional tonnage for its proprietary lines, and to supply consuming markets located thereon. The present line of the Oregon Trunk, from Fallbridge to Bend, represents an investment of about $15,000,000. It would not have been justified by traffic available in its present territory, even without competition. It was built with

high and expensive standards of construction, which greatly increased its cost. Obviously, it was but a fraction of a larger and more comprehensive project then in contemplation, the completion of which has been deferred. The canyon of the Deschutes River affords the only feasible access of a line from the Columbia River into central Oregon. The building war between the Deschutes Railroad, the subsidiary of the Union Pacific system, and the Oregon Trunk, added to the cost of both carriers, and forced them to parallel construction, until an armistice and treaty of peace brought about joint operation of the southerly portion of the line. Either the Oregon Trunk or the Deschutes branch of the Oregon-Washington could handle all the presently available traffic. If either line is to be made to pay, added traffic must be had.

2816 As a further reason for construction of this line, it is shown that the Weyerhacuser Timber Company and the Shevlin-Hixon Timber Company, now operating at or near Bend, have large timber holdings in the Klamath Basin, and desire to establish mills there; the mill of the Weyerhaeuser Timber Company to be located about 5 miles south of Klamath Falls. The timber produced by these companies has heretofore been shipped from Bend principally to territory reached by the northern transcontinental lines, and it is their desire to continue to serve that territory, hence, their need of the proposed line of the Oregon Trunk, which would afford a route about 94 miles shorter than could be afforded by the use of the Southern Pacific from Klamath Falls to Portland. The advantages of competition are stressed by these lumber companies: In fact, it seems to be the policy of one of them to locate no important mills at points served by only one carrier. The advantages of a diversified car supply, recognized in the coal industry, are equally important to lumber producers. There are the possibilities of failures of operation or of management, calamities, labor disturbances, and surplus production or consumers' demands, upon one railroad, which might well be overcome if the service of another carrier were available. Especially would this be a probability where the two carriers approach from different directions and meet at the common point. Competition as a stimulus for efficient operation has been recognized by us. As was the case in Construction of Line by Wenatchee Southern Ry. Co., 90 I. C. C. 237, 256, important and growing industries on the line proposed are shown to require efficient transportation. Notwithstanding all that may be said favorable to the dominant carrier in this section, and its present service, it has failed at times to meet demands made upon it. Advantages to the shippers of an additional outlet for their product are apparent. It is desirable that transportation facilities of high order be available to shippers from the Klamath Basin and central Oregon. The assurance of access to lines other than the Southern Pacific at critical periods is a factor of prime importance to such shippers and is clearly in the public interest. It is probable the competition afforded would stimulate the Southern Pacific to further improve its service. Competition, within reason,

rather than monopoly, is in the public interest. The foregoing will be recognized as a close paraphrase of portions of the report in the cited case.

Some question is raised in the record as to whether the rates from Bend will be carried by the Southern Pacific (which does not serve Bend) to Klamath Falls, and if so, whether the Oregon Trunk would be compelled to meet such rates. The general basis of rates into the territory, we must presume, will be such as the law requires or permits; and this question is of minor importance.

As compared with the total amount of money involved in the projects covered by these six finance applications, the amount of duplication of investment due to the proposed parallelling of the lines of the Oregon, California & Eastern from the Williamson River to the Sprague River, and thence to Klamath Falls is not considerable. As compared with the investment proposed by the Oregon Trunk, it is considerable; and as compared with that to be made by the Oregon, California & Eastern, it is substantial. The duplication of expense of construction which could be avoided by the joint use of the line of the Natron cut-off from Paunina into Klamath Falls, is substantial, and runs into the millions of dollars. Besides duplication of mileage, the Oregon Trunk would have to construct 34 miles more track than the length of the Natron cut off would involve. It is understood that the Oregon Trunk proposes its own terminals in Klamath Falls.

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2818 It is asserted by the Oregon Trunk that the lines of the Oregon, California & Eastern, present and proposed, would not be suitable for use as part of its proposed through line, but, recognizing the objections to unnecessary railway construction, that it is willing to enter into any suitable arrangement with the Oregon, California & Eastern for joint use of its line, if constructed upon the proper standard. As has been stated, the Oregon Trunk sought and now desires the use of the Natron cut-off between Paunina and Klamath Falls, and the line proposed by the Williamson River and through Bonanza is put forward as a second choice, to keep as far from the Natron cut-off as the configuration of the country permits. The construction from Bend to Paunina would not be warranted, however, if the line from the North terminated there, without access to the Klamath Basin upon the basis usually enjoyed by originating and terminating carriers.

As ancillary to other considerations, it is further urged in behalf of the Oregon Trunk application that the construction of its proposed line would meet the need of a through north-and-south line east of the Cascades for possible military use. This phase was strongly urged in the Oregon commission's case in Docket No. 14392. It was referred to in Consolidation of Railroads, 63 I. C. C. 455, appendix, p. 589, in the report of Professor Ripley:

From a national point of view, the important line, strategically, is the continuation of the north-and-south Deschutes River line to complete another route between the Columbia River and California. It would come out at the southern end by Klamath Falls and so on to a connection at Weed with the Southern Pacific at San Francisco. The larger significance of this project is that it would provide the Pacific coast with at least two through lines of railway to connect California and Washington. Southern California has three railroads north and south, parallel to the coast. Northern California and Oregon, at the narrowest point in Oregon, have only one complete through line. Two railroads are built part way, but from Tehama to Eugene there is but a tenuous line of communication. A trestle blown up, or a tunnel wrecked, in time of war would compel military communication to take place by encircling the entire huge triangle east to the Great Salt Lake. The need of such another interior north-and-south line of communication was clearly demonstrated in the late war. North, in Washington, the military necessities are adequately covered.

The importance from the standpoint of national defense of a north-and-south military communication lateral sheltered line of railroad was brought before us and considered in Construction of Line by Wenatchee Southern Ry. Co., supra, at page 249. See also Construction of Line by Rio Grande City Ry. Co., 90 I. C. C. 583, 588.

This phase of the matter is confirmed by an officer assigned to present the views of the War Department. Adequate railroad communication between strategic areas is the strongest link in the national defense. A distance of nearly 500 miles between the important strategic areas of central California and the Columbia River
2819 Basin is said to be the weakest, from a military point of view, of any in the whole country, dependent, as it is, upon the single railroad west of the Cascade Mountains described in the foregoing quotation. This is due not only to the rugged character of the country traversed but also to its proximity to the coast and accessibility by raiders. Upon the construction of a railway line or lines connecting Bend with Klamath Falls, and the broad-gauging of the Nevada-California-Oregon, and the construction of the line between Klamath Falls and Alturas embraced in finance dockets Nos. 4914 and 5111, there would be standard-gauge railroads extending from the Canadian border to the Mexican border, sheltered from the Pacific coast by the rugged Cascade, Sierra Nevada, and southern California mountain ranges, which would connect at inland points with all the transcontinental lines. This would immeasurably strengthen the national defense system.

A lumber company now operating at Bend has a logging road extending about 14 miles southward from Bend, approximately on the route of the proposed line, and a witness states that it is the intention to construct additional logging track in the same direction to a point some miles north of the Natron cut-off. This logging road, present and prospective, is of standard-gauge, and the line might be converted into a road capable of carrying the traffic that might be required, if time afforded for its construction when the emergency arose.

It would, however, be a private carrier, not available for use by shippers as a part of a through route in interstate commerce without first obtaining a certificate from us under the act, and not available to the Government in times of war except as commandeered by the President under the war powers. The proposal of the Oregon Trunk is to construct a line within a time limited which will be available for both civil and military purposes under the restrictions and upon the terms as to use contained in the interstate commerce act and other applicable provisions of law.

Finance dockets Nos. 4914 and 5111. Applications of Central Pacific ["Modoc Northern" line]

The third application in the series, finance docket No. 4914, was made by the Central Pacific Railway Company for authority to construct a line of railroad connecting with its Klamath Falls line near Klamath Falls, Ore., and extending thence southeasterly to a point near Cornell, Modoc County, Calif., about 40 miles. Subsequently, the request was modified with respect to the route, reducing the distances to about 36 miles. Applicant states that one of the purposes of the proposed line was to form part of a through line connecting its lines in Oregon with its main line between San Francisco and Odgen, using the Nevada-California-Oregon Railway when reconstructed as a part of the connecting line. The line to Cornell has been long under consideration. It will serve an area of about 462 square miles, or 296,000 acres, of which 153,000 acres are irrigated and under cultivation, being a part of the so-called Klamath irrigation project of the United States Reclamation Service. In addition, 31,000 acres are in process of reclamation, 62,000 acres are subject to future reclamation, and 150,000 acres consist of pasture and dry farming land. There is no timber. The population of the territory is estimated at about 2,400, excluding Klamath Falls. It is expected that the land will be colonized rapidly, and that in a few years there will be perhaps 3,500 2820 families, each cultivating from 40 to 80 acres of land. It is represented that the freight traffic of this line will consist chiefly of agricultural products and livestock, which should find a market in the San Francisco Bay District and at Portland. The line is expected to be profitable as a feeder of the Southern Pacific but not directly profitable in itself. The cost is estimated at $1,518,332, exclusive of equipment. The method of financing had not been decided at the time of the application.

By the sixth application in the series, finance docket No. 5111, the Central Pacific seeks permission to construct a line from Cornell to Alturas, also in Modoc County, Calif., where it will connect with the line of the Nevada-California-Oregon, thus completing a through line from Klamath Falls to Alturas, a total distance of about 99 miles. The record indicates that the territory between Cornell and Alturas will not produce a great amount of local tonnage, but that its principal value will be as part of a through route between western Oregon and the main line of the Southern Pacific extending eastward from San Francisco. The cost of this portion of the line is estimated at $4,921,892. Of the tributary territory, it is said that about 30% is in timber, 20% is grazing land, and 50% is barren. For about 12 miles from Cornell the country is nearly level, but rises about 700 feet in the succeeding 21 miles, descending nearly to the former level before reaching Alturas. Eighty-pound rail will be used and it is expected that the road will be completed within two years. As in the case of the line between Klamath Falls and Cornell, the method of financing had not been determined.

For reason stated in an early portion of this report, we will give consideration to the last-described application in connection with the other proceedings pending before us.

Finance Docket No. 4924. Application of Southern Pacific Co.
[Control of Nevada-California-Oregon Railway]

Fourth in the list of applications was that filed by the Southern Pacific Company for authority to acquire control of the Nevada-California-Oregon Railway by purchase of capital stock. This application was filed pursuant to a contract executed April 30, 1925, between the Southern Pacific and Charles Moran, the latter representing the owners of all the capital stock and bonds of the Nevada-California-Oregon. As already stated, the Nevada-California-Oregon is a narrow-gauge line extending from Wendel, Calif., a point on the main line of the Southern Pacific, northerly to Lakeview. The line has functioned principally as a feeder for the Southern Pacific, and for many years has operated under financial difficulties. Its circumstances are discussed in considerable detail in Nevada-California-Oregon divisions, 73 I. C. C. 330, in which case we required and increase in the carrier's divisions on through traffic interchanged with the Southern Pacific, and in abandonment by Nevada-California-Oregon Railway, 72 I. C. C. 433, in which we authorized the abandonment of 16 miles of the carrier's line forming a connection with the Western Pacific.

It is the purpose of the Southern Pacific, should its present application be granted, to standardize the line, using secondhand rail and making certain line changes and reductions of grade and curvature which will fit the line for service as part of a through route between western Oregon and Wendel. Although only that portion of

the line south of Alturas would be part of such route, it is expected to standardize the northern portion of the line also, fitting it
2821 for the operation of standard equipment with a view to transportation of the timber products of the territory tributary to Lakeview and the territory west thereof, to be served by the proposed Lakeview extension of the Oregon, California & Eastern. The cost of the line changes between Alturas and Wendel is estimated at $1,779,000 and between Alturas and Lakeview, $956,000.

The contract between the Southern Pacific and Charles Moran provides that Moran shall sell the $975,000 of 6 per cent mortgage bonds of the Nevada-California-Oregon to the Southern Pacific for $448,000, face value, in 5 per cent bonds of the Pacific Electric Railway Company, a subsidiary, and $487,000, face value, in 4 per cent bonds of the Los Angeles Pacific Company. The latter are guaranteed by the Southern Pacific, principal and interest. Moran is to deliver all the common stock of the Nevada-California-Oregon, amounting to $1,450,000, face value, to the Southern Pacific for one dollar. He agrees to clear the property of taxes and other liabilities as of the date of transfer. Moran also agrees to sell the Nevada-California-Oregon preferred stock, $750,000 par value, to the Southern Pacific, on its demand at any time within four years from the date of the agreement, accepting in payment therefor $338,000, face value, in 5% bonds of the Pacific Electric Railway Company and $337,000, face value, in four per cent bonds of the Los Angeles Pacific Company. The Southern Pacific agrees, on demand from Moran within the four-year period, to buy the $750,000 preferred stock, giving in payment therefor $200,000, par value, of each of the above-described issues of bonds. It is further agreed that until the Southern Pacific Company or its nominee acquires the preferred stock of the Nevada-California-Oregon, the present divisions of rates between the two companies shall be continued. The Southern Pacific further agrees to use its best efforts to establish divisions fair to the Nevada-California-Oregon in connection with the interchange of traffic with any other lines that may hereafter connect with the Nevada-California-Oregon. The contract contemplates that the standardization shall be completed within five years. The Nevada-California-Oregon is to continue under the exclusive control and management of its present stockholders until the contract is made effective, and that thereafter the Southern Pacific shall assume the responsibility of providing certain officers in charge of its operations.

The contract contains other provisions not considered necessary to this discussion. Both classes of stock of the Nevada-California-Oregon have voting rights and it would therefore appear that the Southern Pacific will secure control regardless of the immediate transfer of the preferred stock. The total cost to the Southern Pacific of control of the line, as standardized, will be either $4,110,000 or $4,385,000, depending upon the exercise of the options for transfer of the preferred stock. The balance sheet of the Nevada-California-Oregon, dated April 30, 1925, shows a total investment in road and equipment of $3,225,919.

Finance Docket No. 4941. Application of Southern Pacific Co. [Control of Oregon, California & Eastern Railway]

Fifth in the series of applications was that of the Southern Pacific Company for authority to acquire control of the Oregon, California & Eastern Railway by purchase of capital stock. The application was filed pursuant to a contract executed February 3, 1925,
2822 between the Southern Pacific and Robert E. Strahorn, the present owner of the line. The line of the Oregon, California & Eastern, otherwise known as the "Strahorn Line," was projected in 1915. Its promoter was assisted in its construction through the supply of rail and other material by the Southern Pacific, which recognized it as a prospective feeder. The application recites that the Southern Pacific Company has acquired and owns "slightly less than a majority" of the capital stock and all of the outstanding first mortgage bonds of the Oregon, California & Eastern, and now seeks approval of the purchase of the remainder of the stock. The contract provides, among other things, that the Southern Pacific Company shall advance money to pay the floating debt of the Oregon, California & Eastern and shall furnish that company such material as may be required within three years for such improvements and extensions as may be agreed on; the Oregon, California & Eastern to repay the money advanced and the value of the material, with interest at 6 per cent, with funds obtained from a new issue of bonds. The Southern Pacific will have the option of taking the bonds at their market value instead of cash, and if they cannot be sold for more than 85 per cent, plus interest, the Southern Pacific is obligated to take them at that price. The Southern Pacific agrees to maintain equitable rate divisions and to furnish equipment, so far as consistent with its own needs. In return, the Oregon, California & Eastern agrees to route its traffic by the Southern Pacific, as far as possible. Strahorn agrees to sell, and the Southern Pacific to buy, one-half of the $600,000, par value, outstanding capital stock of the Oregon, California & Eastern, at cost, not to exceed, however, $65 a share. Strahorn will sell, and the Southern Pacific will buy, at $850 per $1,000 bond, so many of the Oregon, California & Eastern's outstanding bonds as Strahorn can acquire at that price. The Southern Pacific shall have the option of refunding the bonds with bonds of the new issue of equal par value, for which they may be exchanged at any time under out authority. Strahorn is not to sell his remaining stock for one year, and should he wish to sell any part of it thereafter, he must offer it to the Southern Pacific, which shall buy it at $65 a share, cash, plus $35 a share as compensation for Strahorn's services in developing the property. At any time after three years from the date of the contract, the Southern Pacific may call on Strahorn to sell it his remaining shares on the same terms. Both parties agree to contribute, in proportion to their stock ownership, any amounts that may be necessary to meet bond interest, taxes, and operating deficits.

The price to be paid by the applicant for the property as it now exists appear to be approximately as follows:

$300,000 capital stock at not over 65%	$195,000
300,000 " " " 65% plus 35%	300,000
550,000 bonds at 85%	467,500
Floating debt (approximately)	225,000
Total	1,187,500

This purchase does not include $300,000 of so-called income mortgage bonds owned by the city of Klamath Falls, which are to draw interest at the same rate as may be paid in dividends on the stock. The executive vice president of the Southern Pacific testified that in his opinion the Southern Pacific could not reproduce the property of the Oregon, California & Eastern for the price agreed upon. The applicant, however, has made no detailed estimate of the cost of reproducing the property. The owner testified that the actual money invested in the Oregon, California & Eastern, exclusive of donated land, was about $1,200,000. The price to be paid is probably reasonable.

2823 According to the record the total cost to the Central Pacific and its lessee, the Southern Pacific, of accomplishing the various plans proposed in its pending applications will be about $15,000,000. The estimates of traffic and revenue indicate a net revenue of $507,000 for the third year of operation under the proposed plan. The Natron cut-off is not included in these estimates. Between eastern Oregon and Fernley, Nev., and points east, the route by way of the new line through Klamath Falls and Alturas will be 217 miles shorter than the present route by way of Roseville, Calif., and it is expected that this route will be principally used for the movement of traffic to and from western Oregon. The applicant computes that this change of routing will result in the saving of $432,000 a year in expense, thus effecting a return of $939,000 on the investment of $15,000,000, or about 6¼ per cent per annum. It is expected that the new line will also be of benefit to the public as part of the through rail route east of the Cascades for possible military use. Consideration has been given by the applicant to the practicability of effecting arrangements with the Western Pacific Railway Company whereby the Southern Pacific will be able to use the line of the former between Flanigan and Weso, Nev., thus further reducing the distance 51 miles, making a total saving of 268 miles as compared with the route by way of Roseville. There is at present joint operation by the two companies between Weso and Alazon, Nev.

Conclusions

The foregoing statement of facts has necessarily been prolonged. Our task in determining the issues has been simplified by the proposals put forward by the carriers. There is no question, such as confronted us in the Wenatchee Southern Case, supra, as to the stability of the financial structure of any of the carriers, or as to their general results

from operation. The most unfavorable view of the various projects could be taken, and yet, if all of them were consummated, the ability of the major systems to serve the public adequately would be but inconsiderably impaired thereby. Much of the complaint made by the Oregon Commission, with the important exception of the cross-state line, has been met or will be avoided by our favorable action upon the finance docket applications before us, or some of them. Knowing this, we are unable to find and conclude that the record establishes that the extension by the Union Pacific or its subsidiaries of the line from Harriman to the Natron cut-off is required by the public convenience and necessity, under the limitations imposed by the act.

The general principles which are to guide us are not difficult to establish. Congress has undertaken to develop and maintain, for the people of the United States, an adequate railroad system. It has recognized that as to individual carriers the preservation of the earning capacity, and conservation of the financial resources is a matter of national concern; that the property employed must be permitted to earn a reasonable return; that the building of unnecessary lines involves a waste of resources, and that the burden of this waste may fall upon the public; that competition between carriers may result in harm to the public, as well as in benefit; and that, when a railroad inflicts injury upon its rival, it may be the public which ultimately bears the loss. Texas & P. R. Co. *v.* Gulf, C. & S. F. Ry. Co. —— U. S. —— (Mar. 1, 1926). Our conclusions herein are intended to accomplish such undertaking, and to avert such losses.

2824 Here the conclusion is inescapable that the system proposed by the six finance applications as in the public interest, and is of public convenience and necessity. But it is clear that the public necessity can be met with equal convenience, if a large amount of expenditure be avoided by utilization, on fair and lawful terms, of existing facilities of the applicants, or those to be constructed, in such manner as to give substantially the same service as if all the lines involved were constructed. The duty of the carriers is plain, under a more pronounced policy of cooperation and coordination, to give interior Oregon railroad access to both the north and the south, and the benefits of reasonable competition, in such manner as to afford the greatest service consistent with the minimum of expenditure to accomplish such purpose. This will reduce the operating and carrying charges of all of the applicant railroads, and will not materially impair the service any of them affords, or deprive any carrier of substantial rights or rewards for its enterprise and investment. We shall endeavor to attach conditions to the certificates to be issued herein to accomplish such result, as required by the public convenience and necessity. The heretofore existing policy of the western carriers is in marked contrast with that which obtains in other sections of the country, and should be revised with a view to more intensive use of the transportation machine existing, and the avoidance of unnecessary expenditures in future development. But even in the west, there are

many notable examples of joint use of important sections of track, with success. The recent arrangements for joint use of portions of the Southern Pacific and Western Pacific, and the suggestion by the Southern Pacific for a further development of that joint use in connection with its Modoc Northern project in the record before us, aptly illustrate what can be accomplished when the will is present. The Great Northern, Northern Pacific and Oregon-Washington, parties to the record before us, use the same tracks between Portland and Seattle, Wash., certain minor mileage unconsidered. The Northern Pacific and Oregon-Washington appear to own and operate certain lines in Washington and Idaho, and to be contemplating the joint construction of other, intended, as here, to develop important timber areas. These are specified merely as illustrations. The record is not convincing that the mere use by the Oregon Trunk of the Natron cut-off between Paunina and Klamath Falls would interfere with the use of the cut-off by the Southern Pacific for the principal purposes for which it was constructed.

While the attitude of the Union Pacific system as to the cross-State line is openly adverse to the requirement that it construct such line under the present conditions of ownership of the Natron cut-off and the Willamette Valley lines, yet a careful scrutiny of its position in the light of its past construction leads to the conclusion that under appropriate circumstances it would complete that portion of its historic plan which is represented by the gap between Harriman and the cut-off. In no other way now known can its great investment from Ontario to Burns be made to yield its running and fixed costs. In this respect its situation is similar to that of the Oregon Trunk at Bend, with a high grade line 151 miles long, an incomplete fragment of a larger plan, built on standards contemplating a greater use than it can have if unextended. But the Union Pacific is making no suggestion to us for an extension of its lines; rather, as stated, it opposes an order requiring it to do so. Its opposition is doubtless due in major part to its apprehensions as to the treatment it would receive in the division of traffic, if and when it should reach the Natron
2825 cut-off, which soon is to become a main line of the Southern Pacific. What the Union Pacific could be required to do, upon this record, against its protest, is one thing. Our conclusion, previously expressed, is that the record in the Oregon commission case cannot be depended upon to speak clearly as to the future traffic and its financial results, because of conditions changed since that record was made. This makes it unnecessary to determine the important questions of constitutional authority and of statutory construction raised. But it is another matter as to what we should permit the Union Pacific to do upon the present record, were it convinced of the business soundness of the project for the extension of its rails as long ago planned, to a connection with the Southern Pacific's line. We do not intimate what our determination of that question would be if an application by the Union Pacific were before us. It is, however, appropriate because of the great importance of the subject and the

changes which have occurred since the Union Pacific was before us as a defendant to the Oregon commission's complaint, to suggest to that carrier a most careful review and survey again of the entire situation, in the light of the known facts, our present determination, and the policy of the law as it applies to connecting carriers. The Union Pacific has not come into the hearings upon any of the six pending finance applications, and what its position may be as to its duty in the development of the great section of the country under consideration, as now planned, we are not informed. In its review, it may properly take into consideration the feasibility of participation in the traffic through joint trackage arrangements with the Oregon Trunk. The president of the Great Northern Railway Company, testifying for the Oregon Trunk, strongly advocated a policy of cooperation which would result in the maximum of service with the minimum of construction. The Oregon Trunk, in brief and argument, affirmed this view.

An order and certificate will be entered dismissing the complaint of the Public Service Commission of Oregon, in No. 14392; authorizing the construction and operation sought by the Central Pacific Railway Company for its Modoc Northern line, in finance dockets No. 4914 and 5111; authorizing the acquisition of control of the Nevada-California-Oregon Railway by the Southern Pacific Company; conditionally authorizing the construction of the lines sought by the Oregon Trunk Railway and Oregon, California & Eastern Railway Company in finance dockets Nos. 4810 and 4730, respectively; and conditionally authorizing the acquisition of control of the latter company by the Southern Pacific Company, as sought in finance docket No. 4941.

The Oregon Trunk will be authorized to construct its proposed line from Bend to a connection with the line of the Oregon, California & Eastern, subject, however, to the condition that should it be granted trackage rights over the Southern Pacific line between Paunina and Klamath Falls, it shall construct only to a point of connection with the Natron cut-off; and the authority given the Oregon, California & Eastern to construct its proposed extensions will be conditioned upon its grant to the Oregon Trunk of operating rights over its line, present and proposed, between a point of connection and Klamath Falls, if the Oregon Trunk should fail to reach an agreement with the Southern Pacific for joint operation over its line. The authorization of the Southern Pacific to acquire control of the Oregon, California & Eastern will also be conditioned upon the consummation of an arrangement whereby the Oregon Trunk will be enabled to operate either over the Natron cut-off or the line of the Oregon, California & Eastern.

2826 These conditions are found to be for the public convenience and necessity. No attempt will be made to prescribe details of the arrangement, which must be left to the carriers, but we shall be glad to use our offices in bringing about the desired result. In view of the importance of the matter, and the exigencies of construction, we shall expect the various carriers to undertake in good faith to come

to an understanding which will carry out our conclusions, with no unnecessary delay, or to notify us promptly of their rejection of the terms and conditions imposed. The record will be held open for such further proceedings and orders as may be necessary.

Authority to retain excess earnings under section 15–A of the act will be denied in each case where it is sought herein.

Meyer, commissioner, concurring.

I concur in the results but can not indorse all that is said in the report about competition and military considerations as a reason for new construction of railroads.

The increased tonnage of lumber which the country will demand from the Pacific Northwest and the other traffic that it is known will accompany an increase in the lumber traffic justifies a certain amount of new railroad mileage and new arrangements for the operation of some of the old and new mileage. It is necessary and proper that adequate provision should be made for this future development as far as its extent can reasonably be determined at this time, although the actual development which will take place in the future will demonstrate whether the program which we are approving in this report is somewhat premature. In the prospective tonnage lies the justification for what we are doing. The introduction of competition in a different form and in a territory where it does not now exist to the extent which some regard as desirable is an elusive and theoretical consideration upon which much emphasis is laid in the report but which railroad development everywhere in this and in other countries has demonstrated to be unsound. The theory of competition as applied to railroads and a more or less dogmatic reliance upon it has been in my judgment the greatest single error in our national policy towards railroads. The undue stress which this report lays upon competition tends to perpetuate this fallacy.

Under paragraph (18) of section 1 of the act we are empowered to authorize the construction of new railroads or the extension of existing railroads upon a showing of public convenience and necessity. The purpose of this provision, as is well understood, was that the construction of useless and harmful mileage should cease and that only such new mileage should be created as would add to the utility and efficiency of our national system of transportation. Unless sound transportation considerations justify new construction we have no right under the law to authorize it. No decisive weight can be attached to military considerations and under no circumstances can these considerations alone justify new construction under our authority. Congress did not authorize us to promote a military system of railroads. Many existing railroads years ago incurred military obligations through their acceptance of land grants. Congress has not created a fund out of which subsidies might be paid for the support of new railroad mileage which might be thought necessary from a military

standpoint but which could not be justified from a transportation standpoint. If Congress had authorized us or the War Department or some other agency to make available a certain number of dollars per mile of railroad to be constructed partly or chiefly for military purposes we could add the amount of this subsidy to the estimated amount of earnings from the carriage of freight and passengers and in that way arrive at a conclusion with respect to the ability of the proposed new railroad to live and become a healthy part of our national system. But no such provision has been made. I am not willing to say that it should be. Unless a railroad can be justified purely and solely for transportation reasons we have no right to authorize its construction even though military men may testify regarding the desirability from a military standpoint of such construction. We are without power to authorize or require the construction of military railroads. The exercise of our power must be justified upon other grounds. Military considerations may constitute an added advantage.

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Several references are made in the report to the Wenatchee Southern case, 90 I. C. C. 237. The views expressed in the report in that case have never received the approval of a majority of the commission. Five commissioners only approved the report proper, one concurred in the results, and five dissented.

Woodlock, commissioner, concurring.

The report in the instant case disposes of the various applications in a manner which, things being as they are, is in the main justifiable. The Oregon Railroad Commission does not get its cross-State line, but it does get the material for a new and shorter route to the east by a continuation of the Natron cut-off in a southeasterly direction to a connection with the Nevada-California-Oregon at Alturas. The northern lines obtain entry into the Klamath Falls pine timber on the theory that a great early increase in lumber production in that district is imminent. It is to be noted, however, that this increase in production is predicated upon a rapid clearance of the pine timber in private ownership, and not upon the system of cutting which the Government had adopted in connection with Government timberlands, and it is a grave question whether the public interest will, in the long run, be served by this arrangement. The Southern Pacific lines obtain entry into the pine timber tributary to Lakeview and Silver Lake. Save for the entry of the northern lines into Klamath Falls the "Southern Pacific monopoly" in Oregon remains unbroken. The situation viewed as a whole is interesting as bearing on the question of "railroad competition" under the transportation act, and is, perhaps, deserving of a brief comment.

Congress has enjoined upon the commission the duty of "preserving competition" as far as possible in the grouping of railroads through consolidation. If, however, it had desired to introduce yet more "competition" into the industry, through control in the hands of this commission over new construction and extensions, it would doubtless have instructed us to that effect, instead of referring us to "public

convenience and necessity" as the test to be applied to new projects. "Competition" means alternative service available to a shipper or a district; it implies existence at all times of more facilities than are actually needed to move the traffic. The law clearly contemplates that railroad plant in existence shall, as a whole, receive a "fair return" from the rates. It is impossible, therefore, to avoid the conclusion that when Congress gave us power to govern new construction it did so with the intent that we should prohibit the building of
2828 unnecessary new facilities. New facilities become necessary when existing facilities become inadequate. "Monopoly" is not necessarily synonymous with inadequacy. "Competitive" facilities are not "necessary" merely because they are "competitive." Doubtless, every shipper is ready at all times to welcome another railroad into his territory; doubtless every railroad is ready at all times to enter another railroad's territory and share the business that the other has developed; doubtless no railroad desires a new "competitor"; these are all very natural states of mind. But somebody must pay for the new facilities and they must be supported by the rates. There is no purse of Fortunatus to be tapped; both carrier and shipper may well bear that in mind.

In choosing, moreover, a system of private ownership with private management, and in relying upon private initiative for good railroad service and timely railroad development under a system of regulation based on the "cost-of-service" principle, Congress, doubtless deliberately, elected to take the disadvantages with the advantages, believing that results on balance would justify the choice. Prominent among the disadvantages is, no doubt, the principle of retention by the carrier of the "long haul" over its own lines, which leads to a certain amount of wasteful transportation. This, however, seems to be a necessary concomitant of transportation by individual carrier systems privately owned and operated, and is specifically recognized, in principle, by the act. The fatal flaw in the Oregon commission's proposals arises from this fact. We can not require the Union Pacific to build west across central Oregon to connect with Southern Pacific when the investment would have to depend for return mainly upon traffic to be received from the Southern Pacific at the expense of its own long haul, which traffic the Southern Pacific would not voluntarily surrender. We can not under the law compel such surrender. The "long haul" principle may result in some waste of transportation service, but it is a necessary principle in the system of private ownership and management of individual systems of railroads, and we can not have the latter without the former. Congress made its choice of systems and has legislated accordingly, and it is our duty to give effect to both spirit and letter of the law as it stands, using neither to nullify the other. Our disposition of the applications covered in this report (with a possible exception in the case of the entry of the northern lines into the Klamath Falls basin) seems to me to accord fairly well with both.

Taylor, commissioner, concurring.

The portion of section 1 of the act, in regard to the issuance of certificates of public convenience and necessity with respect to the construction or extension of lines of a railroad, reads in part as follows:

(18) * * * no carrier by railroad subject to this act shall undertake the extension of its line of railroad, or the construction of a new line of railroad, or shall acquire or operate any line of railroad, or extension thereof, or shall engage in transportation under this act over or by means of such additional or extended line of railroad, unless and until there shall first have been obtained from the commission a certificate that the present or future public convenience and necessity require or will require the construction, or operation, or construction and operation, of such additional or extended line of railroad,

* * *

2829 In performing the duty imposed by this statute, this commission can not bring to its aid any facts bearing upon the volume of new traffic which may follow the development of territory to be occupied by the construction of an addition or an extension to a line of railway which are susceptible of exact demonstration. Therefore its conclusions must be based upon an opinion, the merit of which can rest alone upon the methods under which it is arrived at. For this fundamental reason it seems clear to me that when an application is made to this commission for such a certificate, by a person, firm, or corporation presenting conclusive evidence, not only of a desire to make the expenditure, but also of the possession of sufficient funds to do so, this should be looked upon as the weightiest evidence that the enterprise will pay a fair return upon the investment; and when such an application is accompanied by a request from a sufficient number of persons resident of, or interested in, an area of territory great enough to indicate that such additional means of transportation is reasonably required, that the sum of this evidence should be considered highly presumptive, if not conclusive, of the public convenience and necessity for the issuance of such a certificate. It should certainly constitute prima facie evidence of such a necessity, which should endure until refuted by positive evidence to the contrary.

It would seem intolerable, from my viewpoint, that, because a specified territory has been occupied by one particular line of railroad, such carrier should enjoy a perpetual monopoly of its traffic, and that the inhabitants thereof, or those interested in the property located within its borders, should be deprived of railroad competition.

For the above reasons I concur in the conclusion that what has been termed the "northern lines" should be permitted to build into the traffic treasure house of the Klamath Falls pine timber territory, that the residents and all others interested in the traffic to and form this important territory may be enabled to enjoy an enlargement of their facilities to reach sources of their supplies and markets for their products and be given the benefits which will flow from competitive transportation facilities.

I also concur in the conclusion that we should not exercise our jurisdiction under paragraph 21 of section 1 to require the Union

Pacific to construct an extension of its line, which it does not consider necessary or desirable. The showing of public convience and necessity is not sufficient to overcome the objections of that carrier.

McManamy, commissioner, dissenting in part.

The report of the majority states that:

In a broad way, the proceedings dealt with in this report require our answer as to the railroad facilities which shall be afforded eastern Oregon and northern California.

To my mind, our answer to this question does a grave injustice to the State of Oregon and fails utterly to meet the urgent requirements of the people of Oregon and southwestern Idaho for better and more direct transportation facilities. Eastern Oregon, an empire of some 33,000 square miles, lies underdeveloped because of lack of
2830 means of getting its products to market. The need for the cross-State line, as urged by the Oregon commission, has existed for many years and because of this decision it will remain unsatisfied for many years to come. Many cross-State lines have been proposed but the one with which this case deals, proposed some 20 years ago by the Union Pacific, would leave the main line of the Oregon Short Line at Ontario, Oreg., and extend westerly with the ultimate purpose of reaching the coast and not only developing the agricultural country in the center of the State but obtaining a share of the lumber traffic which must flow from the immense bodies of standing timber east and west of the Cascades. About 150 miles of this line was built and is now unprofitable because the original plan was not carried out. After waiting all these years without any substantial increase in the railroad mileage in this portion of the State, the people of the State of Oregon, through their railroad commission, sought an order from us requiring the construction of this line in the interest of the public.

After the case was heard, proposed report circulated, and argument had, the Southern Pacific proposed a series of improvements which it is claimed will take the place of the proposal of the Oregon commission and furnish adequate transportation for that part of the State which requires additional transportation facilities. To my mind the record in this case falls far short of establishing that fact.

The projects involved can be separated into two groups, namely, (1) the cross-State line and branches which constitute the larger part of the Oregon commission program, and (2) the alternative proposals of the Southern Pacific and the Oregon Trunk railroads. This decision denies in toto the complaint of the Oregon commission and in a general way approves the program of the Southern Pacific Railroad and the Oregon Trunk.

My objections go mainly to the disposition here made of the request of the Oregon commission, but some features of the rights granted deserve unfavorable comment because of their ultimate effect. I have no criticism to offer concerning the applications of the Central Pacific in finance dockets Nos. 4914 and 5111 for construction of a short cut from Klamath Falls, Oreg., to Alturas, Calif., a point on the Nevada, California & Oregon Railway. This will afford a shorter

route eastward over the Southern Pacific than the present route via Roseville, Calif.

I have no serious criticism concerning the approval of the application of the Southern Pacific in finance docket No. 4924 for acquisition of the Nevada, California & Oregon Railway, but I think this approval should have carried a reservation of future joint use from Lakeview, Oreg., to Alturas to provide for possible future movement of traffic between eastern and central Oregon on the one hand and central California on the other without unnecessary duplication of facilities.

I am opposed to the approval of the application in finance dockets Nos. 4941 and 4730 by which the Southern Pacific acquires control of the so-called Strahorn lines in the Klamath Basin with the various extensions thereto, because that proposal ties up railroad mileage and available routes in the Klamath Basin to an extent that will make it extremely difficult, if not impossible, for any other railroad to obtain a foothold therein. We properly let the northern lines reach Klamath Falls by approving the application of the Oregon Trunk in finance docket No. 4810, but we then restrict their usefulness by giving the Southern Pacific control of all the surrounding territory.

2831 My chief objection, however, goes to the denial of the complaint of the Public Service Commission of Oregon in docket No. 14392 for an order or orders under paragraph (21) of section 1 of the act requiring construction and operation of the cross-State line and branches. This denial is based on (a) alleged lack of present and potential traffic to support a cross-State line, and (b) the fact that the Union Pacific did not apply for authority to build such a line.

Taking first the question of traffic, the conclusion is expressed "that the record in the Oregon commission case can not be depended upon to speak clearly as to future traffic and its financial results because of changed conditions since that record was made." There are no changed conditions including those which will result from our action in this case which indicate to my mind that the estimates of the Oregon commission were other than conservative. My opinion is that the report of the majority is ultraconservative with respect to present and potential traffic possibilities. Under the head of "potential and probable traffic" reference is made to the Senate resolution of February 4, 1924, in respect to which we made a report transportation facilities in Northwest Pacific States, 87 I. C. C. 472. The purpose for which this reference is made is not evident because our report in that case contains not one word concerning traffic or other conditions in the portion of the State of Oregon dealt with in this case. I shall not attempt to enumerate all of the sources of available and potential traffic in the area to be served by the line proposed by the Oregon commission because the report, conservative as it is, shows ample resources to justify the completion of the project. I can not refrain, however, from quoting from the report the statement that the national forest reserves in eastern Oregon contain timber estimated at 47,000,000,000 feet and privately owned lands contain 29,510,000,000 feet, and that 24 per cent is mature and will deteriorate

rapidly. This means that to-day there are approximately 17,000,000,000 feet of timber in eastern Oregon that is now mature and should be gotten out without delay and that not to exceed 50 per cent of it can be reached by logging roads from the present and proposed lines. In view of the rate at which our timber resources are being exhausted, this situation deserves more consideration than has been given it.

The so-called 75-mile stretch of semiarid territory in the central part of the State is stressed as one of the chief difficulties in the way of the construction of the cross-State line although it is admitted that the construction work would not be unusually heavy. If that were an insurmountable obstacle, which transcontinental line would have ever been built? Each one of them has crossed from four to ten times that distance of semiarid or arid country, some of which has since developed into the most profitable territory served by the line. No more arid country ever existed on earth than the Imperial Valley in southern California, but since transportation has been provided it is one of the most profitable sections served by the Southern Pacific. The same is true of sections in the State of Washington, therefore why should that be stressed as a reason for not giving the admittedly fertile sections of the State of Oregon necessary transportation facilities to permit it to develop in a normal and proper way?

Too much consideration is given to the fact that the Union Pacific failed to file an application for a certificate of convenience and necessity to build the cross-State line proposed by the Oregon commission and also the fact that it did not come into the hearings upon any of the six pending finance applications. I can not, of course, say definitely why the Union Pacific did not file such an applica-
2832 tion, but in view of the close relationship which has for years existed between the Union Pacific and the Southern Pacific its reluctance to invade the territory which is claimed by the Southern Pacific is not at all surprising. It is my opinion that with reasonable traffic arrangements the Union Pacific would welcome an order requiring it to proceed with the construction of the cross-State line. The fact that the Union Pacific did not come into the hearings upon any of the six finance applications is not at all significant. Why should it, as long as it did not itself propose to build into that territory?

The report further states concerning the Union Pacific that:

A careful scrutiny of its position in the light of its past construction leads to the conclusion that under appropriate circumstances it would complete that portion of its historic plan which is represented by the gap between Harriman and the cut-off. *In no other way now known can its great investment from Ontario to Burns be made to yield its running and fixed costs.* (Italics mine.)

We than suggest to the Union Pacific—

A most careful review and survey again of the entire situation, in the light of the known facts, our present determination, and the policy of the law as it applies to connecting carriers.

I do not quite understand what we mean by this statement because as a direct result of the decision in this case every inducement for the

Union Pacific to build into this territory has been rendered less potent. If the Union Pacific has been deterred from building this line because of its doubt as to whether or not it would be permitted to participate in the immense volume of traffic west of the Cascades, surely we can not expect this admonition to have much weight after we have given to other lines a large share of the traffic east of the Cascades, including all in the Klamath Basin and have given no intimation that the present situation west of the Cascades would be changed.

Notwithstanding that the products of western Oregon are such that they normally should move to eastern markets the preponderance of movement of traffic from that section due to the absence of through routes eastward is to California and other territory to the south reached by the Southern Pacific.

The majority report states that the approval of the applications included in this report will give "interior Oregon railroad access to both the north and the south." But this is not what is sought by the people of Oregon and not what the development of the country requires. It is true that within certain limits the products of Oregon will find a market in California and livestock from the interior part of the State will find a market in San Francisco, Portland, or Puget Sound points, but, broadly speaking, the markets needed for the State of Oregon are not to be found in Washington or in California. Both of those States produce to a very great extent the same commodities that are produced in Oregon and both States produce such commodities in excess of their needs. What Oregon needs is, first, development of the interior of the State, and, second, direct routes to intermountain, middle western, and eastern markets. The record shows that there has always been a more or less chronic shortage of freight cars in western Oregon during producing seasons because of its dependence upon one carrier. The report shows that it was admitted by the assistant general manager of the Southern Pacific and amply corroborated by witness for the shippers that
2833 "Oregon is very remote from the center of consumption and is the hardest country in America to get empties into." The report further states:

Shippers of lumber and other commodities in the State of Washington seldom experience car shortages as severe as those met in the Willamette Valley. They enjoy greater carrier competition and in most instances have available the empty cars of more than one system. *The marketing of Oregon timber is languishing in comparison with that of Washington and California.* (Italics mine.)

This is supported by the fact that with 494,000,000,000 feet of standing timber, Oregon in 1920 had an output of but 3,500,000,000 feet, while Washington with but 335,000,000,000 feet of standing timber had an output of 5,500,000,000 feet, with other years in approximate proportion. The reason for this is not hard to find. Washington's advantage lies in the fact that its producers have direct and competitive transportation over four transcontinental lines to middle western and eastern markets while Oregon traffic must largely move via Washington or via California.

Under this decision Oregon in the future, as in the past, will, so far as transportation matters are concerned, continue to be ancillary to Washington and California in that it must continue to be served by branch-line railroads connecting with trunk lines extending through those States. It must continue to suffer the delay to its products and the resulting handicap to its development resulting from the added expense and time involved in reaching eastern markets via circuitous routes because the only east-and-west trunk line which reaches the State failed (for some reason best known to itself) to ask for a certificate of convenience and necessity to authorize it to complete plans made 20 years ago. For this, eastern and central Oregon is denied opportunity for natural development. For this, Harney and Lake Counties must continue for years to wagon their products and drive their cattle hundreds of miles to market. For this, central and western Oregon producers must continue to depend upon one railroad system. Truly they asked us for bread and we have given them a stone.

The State commission's complaint in docket No. 14392 should have been granted or held open for further testimony. The Union Pacific system should have been directed to formulate its plans for the construction of the cross-State project and submit them to us at such further hearing if held. All of the legal conditions antecedent to the issuance of an order for the construction of this cross-State project apparently have been met on the record. It is shown that this line is "reasonably required in the interest of public convenience and necessity" and there is no contention that "the expense involved" will "impair the ability of the carrier to perform its duty to the public." Instead of contenting ourselves with merely granting the applications made, we should have taken constructive action upon this complaint.

2834 Certificate and order

At a General Session of the Interstate Commerce Commission, held at its office in Washington, D. C., on the 3rd day of May, A. D. 1926

No. 14392 [6]

PUBLIC SERVICE COMMISSION OF OREGON

v.

CENTRAL PACIFIC RAILWAY COMPANY ET AL.

A hearing and investigation of the matters and things involved in these proceedings having been had, and the commission having, on the date hereof, made and filed a report containing its findings of

[6] This certificate and order also embraces finance docket No. 4730, construction of lines by Oregon, California & Eastern Ry. Co.; finance docket No. 4810, construction of lines by Oregon Trunk Ry.; finance docket No. 4914, construction of line by Central Pacific Ry. Co. in Klamath Co., Oreg. and Modoc Co., Cal.; finance docket No. 5111, construction of line by Central Pacific Ry. Co. in Modoc Co., Cal.; finance docket No. 4924, acquisition of control of Nevada-California-Oregon Ry. Co. by Southern Pacific Co.; and finance docket No. 4941, acquisition of control of Oregon, California & Eastern Ry. Co. by Southern Pacific Co.

fact and conclusions thereon, which said report is hereby referred to and made a part hereof:

It is hereby certified, That the present and future public convenience and necessity require the construction by the Oregon Trunk Railway of a line of railroad from Bend, Deschutes County, Oreg., by way of Paunina, Klamath County, Oreg., to the nearest practicable point of connection with the line of the Oregon, California & Eastern Railway Company, now constructed or hereafter to be constructed under authority of this certificate, said line of the Oregon Trunk Railway being a portion of the line described in the application in finance docket No. 4810 and in said report: Provided, however, and the certification in this paragraph is given upon the express condition, that if the said Oregon Trunk Railway shall be granted the right to operate over the line of the Central Pacific Railway Company between a point of connection at or near Paunina, Oreg., and Klamath Falls, Oreg., the said Oregon Trunk Railway shall, in such event, construct only that portion of its proposed line extending from Bend, Oreg., to said point of connection with the line of said Central Pacific Railway Company at or near Paunina, Oreg.

It is further certified, That the present and future public convenience and necessity require the construction by the Oregon, California & Eastern Railway Company of lines of Railroad in Klamath and Lake Counties, Oreg., described in the application in finance docket No. 4730 and in said report: Provided, however, and the certification in this paragraph is given upon the express condition, that if the said Oregon Trunk Railway shall not be granted right to operate over the line of said Central Pacific Railway Company, as hereinbefore provided, the said Oregon, California & Eastern Railway Company shall grant the said Oregon Trunk Railway right to operate over the line of the said Oregon, California & Eastern Railway Company
2835 between a point of connection as aforesaid and Klamath Falls, Oreg.

It is further certified, That the present and future public convenience and necessity require the operation by the Oregon Trunk Railway, under trackage rights, over such parts of the lines of the Oregon, California & Eastern Railway Company or the Central Pacific Railway Company as may be determined under the provisions of this certificate and order.

It is further certified, That the present and future public convenience and necessity require the construction by the Central Pacific Railway Company of lines of railroad in Klamath County, Oreg., and Modoc County, Cal., described in the applications in finance dockets Nos. 4914 and 5111 and in said report.

It is ordered, That no construction by the Oregon Trunk Railway south of Paunina, Oreg., or by the Oregon, California & Eastern Railway Company, authorized herein, shall be commenced until there shall have been filed with this commission a copy of the contract or agreement, granting the right of operation by the Oregon Trunk Railway over the line of the Central Pacific Railway Company or the

line of the Oregon, California & Eastern Railway Company, as hereinbefore provided for.

It is further ordered, That each railway company herein authorized to construct a line or lines of railway shall commence such construction within one year from the date hereof and shall complete the same within three years from the date hereof, and shall report to this commission in writing, within 15 days thereafter, the time of such commencement and completion, respectively.

It is further ordered, That each railway company herein authorized to construct a line or lines of railway, when filing schedules establishing rates and fares applicable on such line or lines, shall in such schedules refer to this certificate and order by title, date, and docket number.

It is further ordered, That all requests in the said proceedings for permission to retain excess earnings be, and they are hereby, denied.

It is further ordered, That the acquisition by the Southern Pacific Company of control of the Oregon, California & Eastern Railway Company by purchase of capital stock, as described in said report, be, and it is hereby, approved and authorized: Provided, however, and this authorization is upon the express condition, that the Oregon Trunk Railway shall be granted right to operate over the line of the Central Pacific Railway Company, or over the line of the Oregon, California & Eastern Railway Company, as aforesaid.

It is further ordered, That the acquisition by the Southern Pacific Company of control of the Nevada-California-Oregon Railway, by purchase of capital stock, as described in said report, be, and it is hereby, approved and authorized.

It is further ordered, That the record be held open for such further proceedings or orders as may be found necessary.

And it is further ordered, That the complaint of the Public Service Commission of Oregon, as recorded in docket No. 14392 and described in said report, be, and it is hereby, dismissed.

By the commission.

[SEAL.] GEORGE B. McGINTY,
Secretary.

2836 *Defendant's Exhibit A*

U. S. District Court, District of Oregon. Filed September 29, 1930, G. H. Marsh, clerk, by W. L. Kenyon, deputy.

2837 Articles of Incorporation of Oregon-Washington Railroad & Navigation Company

Know all men by these presents:

That we, R. B. Miller, R. Koehler and M. J. Buckley, the undersigned, all of Portland, Oregon, do hereby associate ourselves as a corporation under the laws of the State of Oregon, and do hereby adopt the following articles of incorporation, to wit:

Article I

The name of the corporation shall be Oregon-Washington Railroad & Navigation Company.

Article II

The duration of the corporation shall be perpetual.

Article III

The enterprise, business, pursuit, or occupation in which this corporation proposes to engage shall be:

First: To purchase, acquire, own, hold, construct, complete, equip, maintain, and operate the railroads, railroad property and telegraph lines hereinafter mentioned, with their appurtenances, and to
2838 carry freight and passengers thereon, and to receive tolls for such carriage, and in all things, and in every lawful manner, to exercise the powers, privileges, franchises and functions of a railroad company and of a common carrier in respect to each and all of such lines, to wit:

1. All of the constructed railroad and telegraph lines now owned by the Oregon Railroad and Navigation Company, namely: (a) A line from Portland, in the State of Oregon, to Huntington, in said State; (b) a line from Umatilla junction, in the State of Oregon, via Wallula, in the State of Washington to Walla Walla in the State of Washington; (c) a line from Pendleton, in the State of Oregon, via Walla Walla and Colfax to Spokane, in the State of Washington; (d) a line from Heppner junction, formerly known as Willows junction, in the State of Oregon, to Heppner, in said State; (e) a line from La Grande, in the State of Oregon, via Elgin and Wallowa to Joseph in said State; (f) a line from Starbuck, in the State of Washington, to Pomeroy, in said State; (g) a line from Connell, in the State of Washington, to La Crosse, in said State; (h) a line from Colfax, in the State of Washington, to Moscow, in the State of Idaho; (i) a line from Bolles junction, in the State of Washington, via Dayton, to Turner, in said State; (j) a line from Winona junction, in the State of Washington, to Seltice, in said State; (k) a line from Tekoa, in the State of Washington, to Mullan, in the State of Idaho; (l) a line from Wallace, in the State of Idaho, to Burke, in said State; (m) a line from Sierra Nevada junction, in the State of Idaho, to Sierra
2839 Nevada mine, in said State; (n) a line from Fairfield, in the State of Washington, to Waverly, in said State.

2. The railroad and telegraph line of the Oregon Railroad and Navigation Company from Portland, in the State of Oregon, via St. Johns, to Troutdale, in said State, and in connection therewith a cut-off by a tunnel through the peninsula between the Columbia and Willamette Rivers, a part of said line being now constructed, and the remainder being under construction.

3. A railroad and telegraph line from Portland, in the State of Oregon, on some eligible route to be hereafter selected, to a point at or near the mouth of the Columbia River on either the north or south side of said river, no portion of which has been constructed, but which is mentioned and described in the articles of incorporation of the Oregon Railroad and Navigation Company.

4. A railroad and telegraph line from Coyote, in the State of Oregon, to Stanfield, in said State, none of which has been constructed, but which the Oregon Railroad and Navigation Company proposes to construct.

5. The railroad and telegraph line owned and now under construction by Des Chutes Railroad Company from Des Chutes station, on the line of the Oregon Railroad and Navigation Company, in the State of Oregon, to Bend, in said State, and all of the interest, estate, right, possession and use of Des Chutes Railroad Company in and to any part of the railroad and telegraph line of Oregon Trunk Railway between said Des Chutes station and Bend, in the State of Oregon.

2840 6. The constructed railroad and telegraph line now owned by Columbia Southern Railway Company extending from a point at or near Biggs station, in the State of Oregon, to Shaniko, in said State.

7. The constructed railroad and telegraph line now owned by Columbia River & Oregon Central Railroad Company, extending from Arlington, in the State of Oregon, to Condon, in said State.

8. The constructed railroad and telegraph line now owned by Umatilla Central Railroad Company, extending from a point on the line of the Oregon Railroad and Navigation Company near Pendleton, in the State of Oregon, to Pilot Rock, in said State; and the railroad and telegraph lines projected and proposed to be constructed by Umatilla Central Railroad Company, namely: (a) A line from a point at or near Pilot Rock, in the State of Oregon, on such route as may be selected by the board of directors, to a point at or near the confluence of Snake Creek and the north fork of John Day River, in the State of Oregon; (b) a line of railroad from a connection with the last-named railroad line at or near the confluence of Bear Creek and Birch Creek, in Umatilla County, Oregon, to a point on Camas Creek, at or near the confluence of Camas Creek and Hideway Creek, in said State.

9. The constructed railroad and telegraph line now owned by Snake River Valley Railroad Company, from Wallula, in the State of Washington, along the Snake River to Grange City, in said State.

2841 10. The constructed railroad and telegraph line of Oregon, Washington & Idaho Railroad Company extending from Lewiston junction, in the State of Washington, to Lewiston, in the State of Idaho, and all of the interest, estate, rights, possession, and use of Oregon, Washington & Idaho Railroad Company in and to the railroad and telegraph line owned by Northern Pacific Railway Com-

Article I

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Article II

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The enterprise, business, pursuit, or occupation in which this corporation proposes to engage shall be:

First: To purchase, acquire, own, hold, construct, complete, equip, maintain, and operate the railroads, railroad property and telegraph lines hereinafter mentioned, with their appurtenances, and to
2838 carry freight and passengers thereon, and to receive tolls for such carriage, and in all things, and in every lawful manner, to exercise the powers, privileges, franchises and functions of a railroad company and of a common carrier in respect to each and all of such lines, to wit:

1. All of the constructed railroad and telegraph lines now owned by the Oregon Railroad and Navigation Company, namely: (a) A line from Portland, in the State of Oregon, to Huntington, in said State; (b) a line from Umatilla junction, in the State of Oregon, via Wallula, in the State of Washington to Walla Walla in the State of Washington; (c) a line from Pendleton, in the State of Oregon, via Walla Walla and Colfax to Spokane, in the State of Washington; (d) a line from Heppner junction, formerly known as Willows junction, in the State of Oregon, to Heppner, in said State; (e) a line from La Grande, in the State of Oregon, via Elgin and Wallowa to Joseph in said State; (f) a line from Starbuck, in the State of Washington, to Pomeroy, in said State; (g) a line from Connell, in the State of Washington, to La Crosse, in said State; (h) a line from Colfax, in the State of Washington, to Moscow, in the State of Idaho; (i) a line from Bolles junction, in the State of Washington, via Dayton, to Turner, in said State; (j) a line from Winona junction, in the State of Washington, to Seltice, in said State; (k) a line from Tekoa, in the State of Washington, to Mullan, in the State of Idaho; (l) a line from Wallace, in the State of Idaho, to Burke, in said State; (m) a line from Sierra Nevada junction, in the State of Idaho, to Sierra
2839 Nevada mine, in said State; (n) a line from Fairfield, in the State of Washington, to Waverly, in said State.

2. The railroad and telegraph line of the Oregon Railroad and Navigation Company from Portland, in the State of Oregon, via St. Johns, to Troutdale, in said State, and in connection therewith a cut-off by a tunnel through the peninsula between the Columbia and Willamette Rivers, a part of said line being now constructed, and the remainder being under construction.

3. A railroad and telegraph line from Portland, in the State of Oregon, on some eligible route to be hereafter selected, to a point at or near the mouth of the Columbia River on either the north or south side of said river, no portion of which has been constructed, but which is mentioned and described in the articles of incorporation of the Oregon Railroad and Navigation Company.

4. A railroad and telegraph line from Coyote, in the State of Oregon, to Stanfield, in said State, none of which has been constructed, but which the Oregon Railroad and Navigation Company proposes to construct.

5. The railroad and telegraph line owned and now under construction by Des Chutes Railroad Company from Des Chutes station, on the line of the Oregon Railroad and Navigation Company, in the State of Oregon, to Bend, in said State, and all of the interest, estate, right, possession and use of Des Chutes Railroad Company in and to any part of the railroad and telegraph line of Oregon Trunk Railway between said Des Chutes station and Bend, in the State of Oregon.

2840 6. The constructed railroad and telegraph line now owned by Columbia Southern Railway Company extending from a point at or near Biggs station, in the State of Oregon, to Shaniko, in said State.

7. The constructed railroad and telegraph line now owned by Columbia River & Oregon Central Railroad Company, extending from Arlington, in the State of Oregon, to Condon, in said State.

8. The constructed railroad and telegraph line now owned by Umatilla Central Railroad Company, extending from a point on the line of the Oregon Railroad and Navigation Company near Pendleton, in the State of Oregon, to Pilot Rock, in said State; and the railroad and telegraph lines projected and proposed to be constructed by Umatilla Central Railroad Company, namely: (a) A line from a point at or near Pilot Rock, in the State of Oregon, on such route as may be selected by the board of directors, to a point at or near the confluence of Snake Creek and the north fork of John Day River, in the State of Oregon; (b) a line of railroad from a connection with the last-named railroad line at or near the confluence of Bear Creek and Birch Creek, in Umatilla County, Oregon, to a point on Camas Creek, at or near the confluence of Camas Creek and Hideway Creek, in said State.

9. The constructed railroad and telegraph line now owned by Snake River Valley Railroad Company, from Wallula, in the State of Washington, along the Snake River to Grange City, in said State.

2841 10. The constructed railroad and telegraph line of Oregon, Washington & Idaho Railroad Company extending from Lewiston junction, in the State of Washington, to Lewiston, in the State of Idaho, and all of the interest, estate, rights, possession, and use of Oregon, Washington & Idaho Railroad Company in and to the railroad and telegraph line owned by Northern Pacific Railway Com-

pany, extending from Lewiston, in the State of Idaho, to Joseph, in said State, including the terminal property of Northern Pacific Railway Company at Lewiston, in the State of Idaho, under and by virtue of contracts made by Oregon, Washington & Idaho Railroad Company with Northern Pacific Railway Company; and all of the interest, estate, rights, possession, and use of Oregon, Washington & Idaho Railroad Company in and to the railroad and telegraph line owned by Clearwater Short Line Railway Company extending from Joseph, in the State of Idaho, to Grangeville, in said State, under and by virtue of contracts heretofore made by Oregon, Washington & Idaho Railroad Company with said Clearwater Short Line Railway Company.

11. The constructed, partially constructed, and projected railroad and telegraph line now owned, constructed, or proposed to be constructed by Northwestern Railroad Company from a point on the line of Oregon Short Line Railroad Company, about two miles east of Huntington, Oregon, and extending along the Snake River, via Clarkston, Idaho, and crossing the Snake River to a point of connection with constructed line of Oregon, Washington & Idaho Railroad Company near Lewiston, Idaho.

2842 12. The constructed railroad and telegraph line now owned by Idaho Northern Railroad Company extending from Enaville, in the State of Idaho, to the mouth of the Paragon Gulch, about six miles east of the town of Murray, in said State.

13. The constructed railroad and telegraph line now owned by Lake Creek & Cœur d'Alene Railroad Company, extending from Lake junction, on the line of the Oregon Railroad and Navigation Company, in the State of Washington, to Lake Point, on Cœur d'Alene Lake, in the State of Idaho.

14. The constructed railroad and telegraph line now owned by Ilwaco Railroad Company, extending from Megler, in the State of Washington, via Ilwaco, to a point on the navigable waters of Shoalwater Bay at or near Nahcotta, in said State.

15. The constructed railroad and telegraph line now owned by Oregon and Washington Railroad Company from Centralia, in the State of Washington, to Hoquiam, in said State, and the constructed railroad and telegraph line now owned by Oregon and Washington Railroad Company from Wabash, in the State of Washington, to Tono, in said State, and any constructed railroad and telegraph lines now owned by Oregon and Washington Railroad Company, on any part or parts of the route between Everett, in the State of Washington, and Portland, in the State of Oregon, and the estate, interest, right, use, and possession of Oregon and Washington Railroad Company in and to any and all lines of railroad on any part of the route

2843 from Everett, in the State of Washington to Portland, in the State of Oregon, now enjoyed and possessed, or hereafter to be enjoyed or possessed by Oregon and Washington Railroad Company under contracts made by said company with Chicago, Milwaukee & Puget Sound Railway Company, with Northern Pacific Railway Company, with Northern Pacific Railway Company and Spokane,

Portland & Seattle Railway Company, or with the Oregon Railroad and Navigation Company, each of said contracts relating to parts of said line from said Everett to said Portland, including the bridge of Spokane, Portland & Seattle Railway Company across the Columbia River, near Vancouver, Washington.

16. The railroad and telegraph line projected and proposed to be constructed by Oregon and Washington Railroad Company, from a point at or near Winlock, Lewis County, in the State of Washington, to Sulphur Springs, in said State.

17. The constructed railroad and telegraph line now owned by the Malheur Valley Railway Company, extending from Ontario, Oregon, to Vale, in said State, and a railroad and telegraph line projected and proposed to be constructed by said Malheur Valley Railway Company from Vale, in the State of Oregon, to Brogan, in said State.

18. That part of the railroad and telegraph lines projected and proposed to be constructed by Oregon Eastern Railway Company, consisting of: (a) A line from Vale across the State of Oregon to a point at or near Odell, in said State; (b) a line from a point in
2844 Christmas Valley, in the State of Oregon, on said line from Vale to Odell, thence through Silver Lake Valley and through Chewaucan Valley and Goose Lake Valley to a point on the boundary line between California and Oregon, in township forty-eight (48) north, range fourteen (14) east of Mt. Diablo Meridian; (c) a line from Bend, in the State of Oregon, to Odell, in said State.

19. That part of the constructed, partially constructed, and projected railroad and telegraph lines of the North Coast Railroad Company hereinafter mentioned, to wit:

(a) A line from Attalia, a point on the line of the Snake River Valley Railroad Company in Walla Walla County, in the State of Washington, to North Yakima, in said State.

(b) A line from Sunnyside junction, a point on the last-named line in Yakima County, in the State of Washington, to Sunnyside, in said State.

(c) A line from North Prosser, in the State of Washington, to Prosser, in said State.

(d) A line from Granger, in the State of Washington, through Toppenish to a point near Fort Simcoe, in said State.

(e) A line from some point hereafter to be selected on the line from Granger to Fort Simcoe, in the State of Washington, thence northerly to Parker siding, in said State, a point on the Attalia-Yakima line south of Yakima City.

2845 (f) A line from Benton through Hanford, White Bluffs, Beverly, and Wenatchee to the mouth of Okanogan River, all in the State of Washington.

(g) A line from a point on the Attalia-North Yakima line south of Richlands, thence through Richlands to Hanford, all in the State of Washington.

(h) A line from Spokane through Cheney, Cow Creek junction, and Hooper to a connection with the line of the Snake River Valley Railroad Company near Ayer, all in the State of Washington.

(i) A line from a point on the last-named line near the crossing of the Snake River southerly to Walla Walla, all in the State of Washington.

(j) A line from Cow Creek junction, a point on the line from Spokane to Ayer, through Connell and Ringold Bar to Priest Rapids junction, between Benton and Hanford, all in the State of Washington.

(k) A line from a point on the Spokane-Ayer line south of Sprague, thence in a northwesterly direction to Davenport, all in the State of Washington.

Second: To acquire in any lawful manner and to own and operate all or any part of the railroads, steamboats, steamships, telegraph lines, and all rights, privileges, and franchises exercised in connection therewith, now owned by the Oregon Railroad and Navigation Company, the Columbia and Palouse Railroad Company,
2846 Oregon and Washington Railroad Company, Columbia River & Oregon Central Railroad Company, Columbia Southern Railway Company, Des Chutes Railroad Company, Ilwaco Railroad Company, Lake Creek & Cœur d'Alene Railroad Company, Oregon Eastern Railway Company, Oregon, Washington & Idaho Railroad Company, Spokane Union Depot Company, Snake River Valley Railroad Company, Southern Extensions Railway Company, Umatilla Central Railroad Company, Walla Walla and Columbia River Railroad Company, North Coast Railroad Company, Idaho Northern Railroad Company, Northwestern Railroad Company, Malheur Valley Railway Company, or of either or any of said companies, and all or any other property of any kind now owned by either or any of said companies; and also to acquire, own, hold, and operate the necessary stations, station facilities, side tracks, terminal facilities, and branches necessary or proper for the conduct of said properties and each of them, and to construct, complete, equip, maintain, and operate said railroads and telegraph lines and branches, steamboats and steamships, and to carry freight and passengers thereon and to receive tolls for the carriage of the same.

Third: To have, enjoy, and exercise in connection with each of said constructed, partially constructed, or projected lines of railroad and telegraph lines hereinbefore mentioned and between the termini of each of said lines all of the franchises, rights, privileges, and functions of a common carrier and of a railroad company.

2847 Fourth: To purchase or consolidate with, lease or otherwise acquire, and to operate and maintain, on such terms as may be agreed upon, any railroad or railroads in the States of Oregon, Washington, and Idaho, with its or their rolling stock, equipment, and appurtenances, and to construct and complete the same to its or their authorized terminus or termini; to assume or guarantee the payment of any bonds issued by any railroad company or companies whose property is so purchased, leased, or otherwise acquired; to sell, lease, or otherwise dispose of, or mortgage all or any part of its railroads, telegraph lines, or property of every nature whatsoever.

Fifth: To facilitate and to assist in the construction, building and extension, equipment and operation of any railroad line, steamship

or steamboat line in Oregon, Washington, or Idaho, or steamship line running from any point in the States of Oregon, Washington, or Idaho, to any other points, and connecting, or intending to connect or exchange traffic with the railroad, steamships, or steamboats of this corporation, and for such purpose to subscribe for or purchase the stock or bonds of any company owning or operating any railroad, steamships, or steamboats, and to guarantee, or otherwise secure, the payment of any such bonds or the interest thereon, by pledge or mortgage of the property of this corporation, or any part thereof, or otherwise, and to consolidate with, or to lease or contract for, the operation and maintaining of any and all of such railroads, steamships, or steamboat companies so aided.

2848 Sixth: To build, purchase, own, lease, or operate steamboats between the ports of Portland, Astoria, Seattle, Tacoma, or any points on Puget Sound, Victoria, Vancouver, San Francisco, and points in Alaska, or any other ports on the Pacific Ocean, and steamboats on the Columbia, Willamette, Snake Rivers, Cœur d'Alene Lake and Puget Sound, and Shoalwater Bay, and to build, purchase and own or lease docks, piers, locks, warehouses, ferryboats, stages, and other means of transportation in connection with the railroads, steamships, and steamboats of this company, or operated in connection with this company.

Seventh: To purchase or lease lands, whether adjacent or contiguous to its railroads, docks, warehouses, or not, and to hold, possess, improve, lease, sell, mortgage, or otherwise dispose of such lands in such manner as it may be deemed fit.

Eighth: To borrow money on bonds, notes, or otherwise, for the purposes of the corporation, and to mortgage its railroads, steamships, steamboats, franchises, rolling stock, and any and all property to secure the payment thereof.

Ninth: To do all other things necessary or proper for the accomplishment of the business above specified.

Article IV

The principal office and place of business of this company shall be Portland in the State of Oregon.

2849 Article V

The capital stock of this corporation shall be fifty million (50,000,000) dollars, and the amount of each share of such capital stock shall be one hundred (100) dollars.

Article VI

The undersigned, R. B. Miller, R. Koehler, and M. J. Buckley, or any two of them, are hereby appointed to open stock books of the corporation, to receive subscriptions, and organize the corporation.

In witness whereof, we have to these presents, executed in triplicate, set our hands and seals this 23rd day of November, A. D. 1910.

R. B. MILLER [SEAL.]
R. KOEHLER [SEAL.]
M. J. BUCKLEY [SEAL.]

STATE OF OREGON,
County of Multnomah, ss:

Be it remembered, That on this 23rd day of November, A. D. 1910, before me, the undersigned, a notary public in and for said county and State, personally appeared the within named R. B. Miller, R. Koehler, and M. J. Buckley, personally known to me, and known to me
2850 to be the identical persons described in, and who executed, the foregoing articles of incorporation of Oregon-Washington Railroad & Navigation Company, and acknowledged to me that they executed the same as their free and voluntary act and deed for the uses and purposes therein mentioned.

In witness whereof, I have hereto set my hand and seal the day and year first above written.

[SEAL.]

JOHN P. HANNON,
Notary Public for Oregon.

My term as Notary Public expires August 18th, 1912.

2851 *Defendant's Exhibit B*

State of Oregon

Corporation department

I, Mark D. McCallister, corporation commissioner and custodian of the seal of the corporation department of the State of Oregon, do hereby certify that I have carefully compared the annexed copy of supplementary articles of incorporation of Oregon-Washington Railroad & Naviagtion Company with the original now on file in my office, and that the same is a correct transcript therefrom, and of the whole thereof. I further certify that this authentication is in due form and by the proper officer.

In testimony whereof, I have hereunto set my hand and affixed hereto the seal of the corporation department of the State of Oregon.

Done at the capitol, at Salem, Oregon, this 11th day of July, 1928.

[SEAL.]

MARK D. MCCALLISTER,
Corporation commissioner.

U. S. District Court, District of Oregon. Filed Sep. 29, 1930, G. H. Marsh, clerk, by H. L. Kenyon, deputy.

2852 Supplementary Articles of Incorporation
of
Oregon-Washington Railroad & Navigation Company

Whereas, at a meeting of the stockholders of the Oregon-Washington Railroad & Navigation Company, a corporation of the State of Oregon, duly and regularly called and held at the Offices of the company in the city of Portland, Oregon, on the 2nd day of July,

1928, at which there were present and voting, either in person or by proxy, stockholders owning more than seven-eights of the capital stock of said corporation issued and outstanding, to wit: The entire capital stock issued and outstanding, there were adopted by a unanimous vote resolutions amending paragraphs 11 and 18 of section first of Article III of the articles of incorporation of said corporation in the form hereinafter set forth, for the purpose of changing certain parts of its railroad and certain termini therein described, and authorizing and directing the board of directors or a majority of the directors of said corporation to execute and file supplementary articles embodying said amendments, and

Whereas, at a special meeting of the board of directors of said corporation duly called and held at the offices of the company in the City of New York, on the 3d day of July, 1928, said board of directors duly approved and adopted these supplementary articles of incorporation and authorized and directed the same to be executed and acknowledged in behalf of said corporation by any eight directors of said board, being a majority of the directors of said corpo-
2853 ration; and further authorized and directed the officers of said corporation to file the same and publish notice thereof as required by law:

Now, therefore, we E. Roland Harriman, Charles A. Stone, Robert A. Lovett, J. H. Perkins, C. B. Seger, F. W. Charske, R. S. Lovett, C. R. Gray, constituting a majority of the directors of said Oregon-Washington Railroad & Navigation Company, and being thereto duly authorized by the aforesaid action of the stockholders and board of directors of said corporation, do hereby execute and acknowledge supplementary articles of incorporation, amending paragraphs 11 and 18 of section first of Article III of the original articles of incorporation of said corporation to read, respectively, as follows:

11. The line of railroad and telegraph constructed and formerly owned by Northwestern Railroad Company, extending from a point on the line of Oregon Short Line Railroad Company about two miles east of Huntington in the State of Oregon, thence along the west bank of the Snake River to Homestead, in said State.

18. The line of railroad and telegraph extending from Vale, in Malheur County, to Burns, in Harney County, both in the State of Oregon.

In witness whereof, we have hereunto set our hands and seals this 3d day of July, A. D., 1928.

Signed, sealed and delivered in the presence of:

HENRY W. CLARK.
EDWIN M. KINDLER.

E. ROLAND HARRIMAN. [SEAL.]
CHARLES A. STONE. [SEAL.]
ROBERT A. LOVETT. [SEAL.]
J. H. PERKINS. [SEAL.]
C. B. SEGER. [SEAL.]
F. W. CHARSKE. [SEAL.]
R. S. Lovett. [SEAL.]
C. R. GRAY. [SEAL.]

2854 STATE OF NEW YORK,
County of New York, ss:

This certifies that on this 3d day of July, A. D. 1928, before me, the undersigned, a notary public in and for the county of Kings in said State and duly authorized to take acknowledgments in said county of New York, personally appeared E. Roland Harriman, Charles A. Stone, Robert A. Lovett, J. H. Perkins, C. B. Seger, F. W. Charske, R. S. Lovett, C. R. Gray known to me to be the identical persons named in and who executed the foregoing supplementary articles of incorporation, and they severally acknowledged to me that they executed the same freely and voluntarily for the uses and purposes therein mentioned.

In testimony whereof, I have hereunto set my hand and seal, the day and year first above written.

[NOTARIAL SEAL.] FRANK E. TILLEY,
Notary Public, Kings County No. 193, cert. filed in N. Y. Co. No. 77, commission expires March 30, 1929.

Endorsed: 15366. Supplementary articles of incorporation of Oregon-Washington Railroad & Navigation Company. Filed in the office of the corporation commissioner of the State of Oregon at 8.30 o'clock a. m., the 11th day of July, 1928.

MARK D. MCCALLISTER,
Corporation Commissioner.

2855 Endorsed: Instrument Number 79724. Supplementary articles of incorporation of Oregon-Washington Railroad & Navigation Company. Filed at the request of A. C. Spencer, July 20th, 1928, at 1.30 o'clock, p. m., records of Shoshone County, State of Idaho. Harry A. Rogers, county recorder.

STATE OF IDAHO,
County of Shoshone, ss:

I, Harry A. Rogers, county recorder in and for the county of Shoshone, State of Idaho, do hereby certify that I have carefully compared the foregoing copy of the supplementary articles of incorporation of the Oregon-Washington Railroad & Navigation Company, with a certified copy thereof, and that the same is a full, true, and correct transcript therefrom, together with all official endorsements thereon, as the same appears on file and of record, at my office and in my custody.

In witness whereof, I hereunto set my hand and affix my official seal at my office in Wallace, Idaho, this 20th day of July, A. D. 1928.

[SEAL.] (Sgd.) HARRY A. ROGERS,
County Recorder.

2856 *Defendant's Exhibit C*

Extension Crane to Burns, Oregon

U. S. District Court, District of Oregon. Filed Sep. 29, 1930, G. H. Marsh, clerk, by H. S. Kenyon, deputy.

On motion, duly made and seconded, the following preamble and resolutions were unanimously adopted:

Whereas, this company, Oregon-Washington Railroad & Navigation Company, owns and operates a line of railway and telegraph from Ontario to Crane, both in the State of Oregon, and desires to construct, acquire, maintain, and operate a branch line or extension of said existing line of railway, as hereinafter defined and described, and to exercise therefor the right of eminent domain as provided by the laws of the State of Oregon:

Resolved, That this company construct, acquire, maintain, and operate a branch line or extension of its existing line of railway aforesaid from a connection with said existing line of railway at or near its present terminus at Crane, in Harney County, Oregon, thence running in a northwesterly direction to a terminus at or near Burns, in Harney County, Oregon, a distance of approximately 32 miles; and said branch line of railway or extension defined and described as aforesaid is hereby adopted by this company as a branch and extension of its existing line of railway aforesaid; and

Resolved, That copies of these resolutions, certified by the secretary of this company, under its corporate seal, be filed as required by the laws of the State of Oregon, and that the officers of
2857 this company are hereby authorized and directed to do any and all other acts necessary or appropriate for the purpose of complying with or obtaining the benefits of an act of the legislature of Oregon, entitled "An act to provide for the method of building of branch and side lines or extensions of railway companies," approved February 27, 1901.

I, Thomas Price, secretary of Oregon-Washington Railroad & Navigation Company, do hereby certify that the above and foregoing is a true copy of resolutions duly adopted by the board of directors of Oregon-Washington Railroad & Navigation Company, at a regular metting of said board of directors held at the principal office of the company in the City and State of New York on the 8th day of November, 1923, at which a quorum was present.

In witness whereof, I have hereunto subscribed my name and affixed the seal of said company this 8th day of November, 1923.

[SEAL.] THOMAS PRICE,
Secretary.

2858 *Defendant's Exhibit D*

U. S. District Court, District of Oregon. Filed Sept. 29, 1930. G. H. Marsh, clerk, by H. L. Kenyon, deputy.

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2860 Before the Interstate Commerce Commission

Docket No. 19680

PUBLIC SERVICE COMMISSION OF OREGON, COMPLAINANT *vs.* CENTRAL Pacific Railway Company, et al., defendants

Reply of Public Service Commission of Oregon, complainant, and of Public Utilities Commission of Idaho, Grants Pass Chamber of Commerce, Ontario Commercial Club, Douglas County, Oregon, Roseburg, Oregon, Chamber of Commerce, Coos County Chamber of Commerce, Portland Chamber of Commerce of Portland, Oregon, Lane County Court, Springfield Chamber of Commerce, Eugene Chamber of Commerce, Portland Traffic & Transportation Association, Grant County, Oregon, Burns Chamber fo Commerce, Harney County, Oregon, Albany Chamber of Commerce, County Court of Malheur County, Oregon, Willamette Valley Lumbermen's Association and Salem, Oregon, Chamber of Commerce, Interveners to exceptions of defendant carriers

The argument presented by defendant carriers in support of their exceptions herein is, as counsel for carriers state, largely a repetition of the argument contained in their opening briefs, the contents of which was covered by the opening brief filed on behalf of this complainant and the interveners in its behalf. There are, however, a few additions thereto to which we briefly reply.

2861 Objections advanced by Central Pacific and Southern Pacific Companies

Despite the fact that the proposed report herein makes no requiremen of either of these companies, and requires no expenditure on their part they have filed herein voluminous exceptions and argument concerning nearly every phase of the report. While their right to do so

can not be questioned it does seem that in presenting these arguments counsel for these companies have been unusually solicitous of the welfare of Union Pacific lines, upon whom the burden of the suggested investment would, by the terms of the report, fall. However, we will treat briefly of each of the major contentions which they advance.

First among these may be mentioned the legal questions raised with reference to paragraph 21 of section 1 of the act under which this proceeding is primarily presented. These legal questions are presented under three general subdivisions, the first dealing with the constitutionality of the provisions upon which we rely, the second dealing with the wisdom of Congress in enacting such a requirement and the third dealing with the interpretation thereof. The first two matters we will pass without discussion for the obvious reason that it is beyond the scope of the duties of this commission to question either the constitutionality or wisdom of the acts of Congress.
2862 We shall assume for the purpose of this argument that this commission will accept and apply the mandate of Congress as it finds it.

Construction of paragraph 21 of section 1 of the act

It is suggested by counsel that the difficulty with the provisions of subdivision 21 of section 1 may lie in our interpretation of it rather than in the provision itself and to this question we would direct particular attention. Counsel says that the true construction of paragraph 21 is that it provides a procedure for enforcing obligations declared elsewhere in the act or which existed upon carriers by railroad by the common law and that it does not attempt to impose a requirement of construction to new territories. In determining the intent of Congress with reference to this paragraph consideration must be given not to this paragraph alone but to the transportation act as a whole. We must bear in mind first of all the essential intent of Congress in promulgating the transportation act of 1920 and its fundamental purposes concerning our national transportation system.

This act has been before the courts on numerous occasions and there can be no serious doubt as to the essential purpose Congress had in mind. This purpose is probably best expressed by the
2863 United States Supreme Court in the case of Akron, C. & Y. R. R. Co. et al. v. U. S., 43 Supreme Court Reports 270, at page 273, wherein Justice Brandeis speaking for the court said:

"Transportation act 1920, introduced into the Federal legislation a new railroad policy. Railroad Commission of Wisconsin v. Chicago, B. & Q. R. R. Co., 257 U. S. 563, 585, 42 Sup. Ct. 232, 66 L. Ed. 371. Theretofore, the effort of Congress had been directed mainly to the prevention of abuses, particularly those arising from excessive or discriminatory rates. The 1920 act sought to insure, also, adequate transportation service. That such was its purpose Congress did not leave to inference. The new purpose was expressed in unequivocal language. And, to attain it, new rights, new obligations, new machinery, were created."

Among the many provisions of the act designed to foster this clear purpose may be mentioned the recapture clause, the provisions of section 15-A with reference to earnings to be allowed to the carriers, the provisions with reference to division of earnings and the assistance of the weaker lines, the provisions with reference to consolidation of lines, the requirements of subdivision 18 of section 1 providing for certificates of public convenience and necessity for the construction or extension of lines, and the provision under which this proceeding is brought. It should be noted here all of these new features of the act tend to serve the single purpose of providing an adequate
2864 system of transportation for the entire Nation. Most of these requirements result in enlargement upon the rights of the carriers and extend to them protection not theretofore accorded. The old theory advocated by counsel for the carriers in this case, that railroads are built and operated for the sole benefit of stockholders, is supplemented by a newer and more desirable theory which is in effect that they shall be operated to serve the Nation and that so long as they do so they shall be accorded every reasonable protection within the power of Congress.

Most of these several provisions mentioned have been before the judicial tribunals for review and have been approved. It is significant, however, that where these provisions have been beneficial to the carriers they have been accepted by them without question but whenever the public asks something in return and attempts to apply the sections of the law designed for public benefit the act is immediately attacked as unconstitutional and unfair.

Directing particular attention to the convenience and necessity provisions of the interstate commerce act we find that its essential requirements are embraced within paragraphs 18 and 21 of section 1. The first of these provisions provides protection to the carriers against unwarranted invasion of territory occupied and served by them in that it prohibits the construction or operation of an additional or extended line of railroad until there shall first have been obtained from
2865 the commission a certificate that the present or future public convenience and necessity requires or will require such construction or operation. As a necessary and interrelated part of this convenience and necessity provision, and by way of compensation and protection to the public in return for this unusual protection which is afforded to the carriers, Congress has in subdivision 21 of this section provided that: "The commission may after a hearing * * * require any railroad * * * to extend its line or lines."

No convenience and necessity law of which we are aware lacks either of the provisions above referred to. It is certain that the uniform requirement of public convenience and necessity acts with reference to public utility properties throughout the entire country embraces both provisions above mentioned; one for the protection of the utility, the other for the protection of the public. Certainly, no public convenience and necessity act would be complete, nor would it be

equitable in its operation without both provisions. It would be farcical to suggest that the two provisions were not interrelated or that they were not of equal scope.

Yet counsel for carriers in a strained effort to give to paragraph 21 a meaning which would nullify its effect, boldly assert that it refers only to the dealings of the carrier in respect to car supply. They suggest that it authorizes the commission only to require the construc-
2866 tion of spur, industrial switching, and sidetracks. We need look no further than to the act itself to show the absurdity of this claim. Paragraph 22 states specifically that neither paragraphs 18 nor 21 are intended to apply to this class of construction. We quote this in full:

"The authority of the commission conferred by paragraphs (18) to (21), both inclusive, shall not extend to the construction or abandonment of spur, industrial, team, switching or sidetracks, located or to be located wholly within one State, or of street, suburban, or interurban electric railways, which are not operated as a part or parts of a general steam railroad system of transportation."

While it is true the above paragraph refers to such tracks located wholly within one State, it would be unusual, indeed, to find tracks of the character above described located partly in one State and partly in another, and our attention has not been directed to any instance where the jurisdiction of the commission has been exercised over such incidental trackage.

In addition to the degree of clarity which the act itself contains as to its purport and purpose the courts have given us a very clear interpretation thereof. Attention is directed to the case of Detroit & M. R. Co. v. Boyne City, G. & A. R. Co. et al., 286 Fed. 540, at page 545, wherein it is stated:

"It is a cardinal principle of statutory construction that in interpreting the language of a statute the meaning of the words used must, if not so plainly expressed as to leave no room for doubt,
2867 be determined by a consideration not only of such words but also of the purpose with which they were used by the legislative body enacting such statute, and, consequently, of the object thereby sought to be accomplished.

"It is certain that the purpose actuating Congress in adding to the Interstate Commerce Act the provision here involved was, as was pointed out by Interstate Commerce Commissioner Clark while speaking before the Committee on Interstate and Foreign Commerce of the House of Representatives, when such committee was considering the enactment of these amendatory provisions, and shortly before such enactment 'to prevent the building of duplicate lines of railroad because of keen rivalry of certain financial interests, or when the railroads so built will not serve the present or future convenience and necessity, and will simply depend for traffic upon that which they can get away from railroads already built, adding to the total burden of maintenance, capital returns, etc., which the public must pay.'

"Congress had in mind and was endeavoring to correct the disastrous evils, to both the railroads and the public, which for many years had attended the construction of lines of railroad, main and branch, in ruinous competition with each other and with resultant injury to the public, which was compelled to bear the inevitable consequences of such a situation. The statutory provisions now under consideration substituted, as the underlying basis for the construction of new lines of railroad (main and branch), in place of the previously controlling policy of the private desires and am-
2868 bitions of owners of railroads, the new test and rule of public convenience and necessity. The specific mischief, however, which, in this particular instance, it was sought to guard against was the construction of such new lines of railroads, not the construction of merely incidental tracks such as those excepted by paragraph 22 of section 1, from the provisions of the statute. In view of the relatively small expense of these last-mentioned tracks and the inherent improbability of such construction unless actually needed in connection with main or branch lines, it was evidently deemed by Congress unnecessary, if not unwise, to require a public hearing, with the consequently procedural formality and conditions necessarily incident thereto, whenever it should be desired to lay one of these auxiliary tracks so commonly used and needed through the country."

In view of the foregoing significant facts, the express language used by Congress, and the clear interpretation of the courts there can be no question as to the power which Congress sought to and did vest in this commission with respect to requiring the construction of extensions of existing railroad lines.

Public necessity and convenience

Counsel for Southern Pacific and Central Pacific Companies contend there is no showing of public necessity and convenience in this record sufficient to justify an order by the commission requiring the proposed construction. In advancing this contention counsel imply that the public convenience and necessity which would
2869 authorize an order requiring construction is somewhat different than the public convenience and necessity which would authorize or justify the granting of a permissive order upon the application of an interested carrier. To suggest a distinction in the two requirements is to imply that Congress intended to grant more privileges to the carriers than it did protection to the public, a suggestion wholly unwarranted. We have hereinbefore indicated why these two sections must be construed together and given equal force and effect, but for a more complete discussion of the question we would refer to our opening brief herein where the subject is discussed at considerable length.

The principal argument advanced by counsel in an effort to controvert our claim of public convenience and necessity for the proposed line is to the effect that the Southern Pacific system is engaged in

constructing the Modoc Northern line which will provide a somewhat shorter route between western Oregon and Ogden, Utah, and points east thereof than now exist by way of Roseville, California. The plans of Southern Pacific officials with respect to this line are discussed in great detail and counsel conclude with the suggestion that by reason of this proposed construction there is no need for the cross-State line.

In answering this contention it should be sufficient to point out that our claim and plea throughout this entire proceeding has
2870 been for an east and west line through the center of the State of Oregon. The Southern Pacific Company offers us instead a north and south line which is to be constructed almost entirely within the States of California and Nevada. We are asking for a railroad to serve the States of Oregon and the southwestern section of Idaho; the Southern Pacific Company offers us instead a line destined primarily to develop a now unserved area in northern California and to provide an additional route extending north and south between Oregon and California. We have asked for a line which will shorten the distance between western Oregon and points east by approximately 426 miles over the existing route by way of Roseville, California; Southern Pacific Company offers us a route which shortens the distance only approximately half that amount.

While we freely admit that the Modoc Northern will afford some measure of relief to the shippers of western Oregon, it is only a partial relief, and does not fully meet the requirements of public convenience and necessity of western Oregon shippers alone. But assuming for the purpose of argument that the Modoc Northern were adequate and satisfactory to meet the needs of western Oregon, Southern Pacific Company has fulfilled only a single need out of many shown. It has certainly not answered the insistent demand of southwestern Idaho for a direct outlet to the Pacific coast markets; it has
2871 certainly not answered the insistent demand of Malheur County, Oregon, a county of more than 6,000,000 acres, for an outlet to the markets of the coast; it has not answered the demands and necessities of Harney County, Oregon, a county nearly as large as the State of Maryland and larger than the States of Massachusetts and Rhode Island combined, for an opportunity to sell its products in other portions of the State of Oregon and to have market outlets for the many products it can successfully produce; it does not meet the transportation needs of northern Lake County, Oregon, a county with an area of 7,834 square miles, with vast stands of timber, substantial mineral resources, and unlimited agricultural possibilities, yet with less than 14 miles of railroad within its borders. Nor have they answered the need for direct routes for the movement of freight from San Francisco, from Coos Bay and other coast ports to the interior of Oregon and southwestern Idaho, nor of the owners of soda deposits at Alkali Lake that they be permitted to market their products. Nor does the proposal of Southern Pacific Company afford any hope whatever of competitive railroad transportation service in the vast area of Oregon west of the Cascades. In short,

it offers to satisfy a minor and incidental part of our complaint in a minor degree only, but offers nothing as to the more dire transportation necessities confronting the territory affected by our complaint.

2872 Diversion of Traffic

Southern Pacific company next takes serious exception to testimony and exhibits contained in this record by which complainants have claimed for the cross-State line revenue accruing on traffic originating in western Oregon and now routed via Ogden, Utah; likewise to savings in operating cost which will accrue through the routing of traffic via the cross-State line. As a foundation for their argument against the use of this data carriers call attention to the fact that certain witnesses for complainant either directly or impliedly admitted the proposed cross-State line would not be profitable at the outset without such diverted traffic from western Oregon. After attempting to show that this western Oregon traffic could not lawfully be diverted and, therefore, that the saving which we claim would not result, carriers conclude that our proposed construction can not be justified.

Before entering into a discussion of the diversion of this western Oregon traffic, and the propriety of our estimates based thereon, we would point out that the conclusion reached by carriers is entirely fallacious for the reason that it assumes that to show public convenience and necessity we must at the same time show that the line would be profitable to the carriers if constructed. We do not so construe the provisions of law under which our complaint is prosecuted.

2873 Neither this commission nor the courts have ever held that every branch or segment of the transportation system of any carrier must be a profitable investment when considered separate and apart from the balance of the system. Certainly a greater guarantee of profitableness can not be required of a new line during its development period. We urge, therefore, that we are not required by any provision of law nor by any policy of this commission or of the courts to prove that an immediate profit will ensue from the construction and operation of the proposed line. It is our thought in this matter that evidence of revenue and expenses is important as an incident only to our proof of public convenience and necessity and to our proof that the construction will not impair the ability of the carriers to serve the public.

What counsel say with respect to the power of the commission to order joint rates and through routes via the proposed new line is likewise of little significance, for when we have met the two essential requirements of the act above referred to our case is complete.

As we have pointed out in our opening brief, the cross-State line is not dependent for its traffic or revenue upon whether or not it is able to obtain diverted traffic from the existing lines of Southern Pacific company in western Oregon through means of joint rates or

2874 joint traffic arrangements. These are only some of the methods by which the line may be supported. If the carriers do not choose to follow them, there are yet others available, including the

common user of trackage, the extension of branches into virgin territory now unserved and yet offering vast tonnage possibilities. All of these things have been clearly shown in the evidence of the complainant and interveners in its behalf and we are positive we have met the full requirements of the law. If the carriers, through motives of their own, refuse to avail themselves of these possibilities, and the cross-State line should thus prove unprofitable this is a failure chargeable only to themselves. The old adage is to the effect that you may lead a horse to water but you can not make him drink, and this in effect is the suggestion which carriers make. We have fulfilled our part when we provide the tonnage and lead them to it.

Unreasonable Circuity of Haul

Counsel for carriers question the right of the commission to require diversion of western Oregon traffic to the cross-State line by the establishment of through routes and joint rates. While we contend that this question is not of serious importance, for reasons hereinbefore pointed out, we desire to emphasize the fact that power is vested in the commission to require the diversion of western Oregon traffic now delivered to the Union Pacific system at Ogden, Utah.

2875 This commission is empowered by the provisions of paragraph 3 of section 15 of the interstate commerce act, whenever it is deemed necessary or desirable in the public interest, to establish through routes and joint rates for the transportation of passengers and property. The provisions of this section have been frequently applied. To quote from the language of the commission in Blakely Southern. Rd. Co. v. Atlantic C. L. Rd. Co., 26 I. C. C. 344, 348:

"The establishment of joint through rates, generally speaking, tends to expand markets and facilitate trade. They have been required as the result of the numerous decisions of this commission, since the act to regulate commerce was amended authorizing this commission to exercise that power. The amendment in itself declares a public policy established by Congress, which it is the duty of the commission to protect and perpetuate."

In the case of Chicago, Milwaukee & St. Paul Railroad Co. v. U. P. Railroad Co. et al., 88 I. C. C. 312, this commission, in requiring the establishment of an additional through route, used the following significant language, which we believe applicable to the present proceeding:

"It is desirable in the public interest, that the efficiency and availability of all the transcontinental lines be conserved and enlarged, rather than restricted. * * * There can be no doubt that the needs of the public, more especially in the future development of the northwest, would be more adequately met by the establishment of the additional route."

2876 While, under a through route and joint rate, the original carrier is ordinarily entitled to the long haul, this is not true where the inclusion of the originating carrier's lines "would make the

through route unreasonably long, as compared with another practicable through route which could otherwise be established." (Paragraph 4, section 15, interstate commerce act.)

The situation here presented to the commission is certainly one where a through route and joint rate from western Oregon via Crescent and the Union Pacific system, would be justified and within the province of the commission to require, for as Professor Ripley, in discussing the western Oregon traffic, has said:

"The natural flow of the traffic, it is alleged, is down hill to the north from the California boundary and hence out to the east by the Oregon Short Line * * *,"

which is exactly the proposition substantiated by the record herein.

As was said by this commission in the case of Freight Bureau of Little Rock v. M. V. R. R. Co. et al., 13 I. C. C. 243, 245:

"It is the duty of a railroad to carry goods offered to it for shipment but it is not its province to determine to what points these goods shall be carried."

However, the practical monopoly enjoyed by the Southern
2877 Pacific Company in western Oregon has, to all intents and purposes, permitted it to determine the destination of western Oregon freight and in this way say with whom western Oregon may trade and where they may sell their produce.

The authority of this commission to establish through routes and joint rates, notwithstanding the necessity of depriving the carrier of its long haul on traffic, has been upheld by the courts. See St. Louis, S. W. Railway v. U. S., 234 Federal 668.

Further provisions are contained in the act for the purpose of assuring an adequate transportation service, many of which would be of assistance in assuring a trans-State line of tonnage from and to western Oregon. Particular attention is called to paragraph 16 of section 1 of the act:

"(16) Whenever the commission is of the opinion that any carrier by railroad subject to this act is for any reason unable to transport the traffic offered it so as properly to serve the public, it may, upon the same procedure as provided in paragraph (15), make such just and reasonable directions with respect to the handling, routing, and movement of the traffic of such carrier and its distribution over other lines of roads, as in the opinion of the commission will best promote the service in the interest of the public and the commerce of the people, and upon such terms as between the carriers as they may agree
2878 upon, or, in the event of their disagreement, as the commission may, after subsequent hearing, find to be just and reasonable."

Aside from the legal aspect of the diversion plan suggested by some of our witnesses as assuring a reasonable earning to the cross-State line immediately upon its construction, carriers suggest that such a plan would result in injustice to the Southern Pacific Company, the originating carrier. But this suggestion of injustice overlooks entirely the basis upon which this diversion is suggested. Were we

suggesting that the commission require the diversion and limit the earnings on the original haul to the diversion point at Crescent, thus requiring the originating line to be content with a lesser earning that it now derives from its haul to Ogden there might be some ground for complaint. However, such is not the suggestion of this complainant. On the contrary we have proposed a far more equitable arrangement for the Southern Pacific Company than the one under which it now operates in that we propose to give it as great an earning for the shorter haul to Crescent as it now derives for the longer haul to Ogden. In other words, we propose that it be allowed the full net earning which it now enjoys for a service much less expensive. Certainly there is no injustice in this. It is, in fact, difficult to understand why Southern Pacific officials do not gladly welcome such a plan to reduce their operating expenses without decreasing earn-
2879 ings. We are confident its adoption would result in as great a benefit to the stockholders of the Southern Pacific system as will result to the public through expedited service.

In discussing the extent of the circuity of existing routes carrier counsel ignore entirely the fact that the traffic now actually moves via Roseville, California, approximately 426 miles longer than via the proposed route, they assume that the Modoc Northern is constructed and in operation and, therefore, that the circuity is 213 miles instead of 426 miles. They also consider in their argument only the percentage of circuity on long hauls and point out on a haul to Omaha the percentage of circuity is only 11.8 per cent, implying that on shipments of lumber such a percentage of circuity would not be reasonable.

With this contention we cannot agree. While it is true testimony of certain lumber witnesses called by the carriers would indicate that a difference of 213 miles would not be of great importance, the preponderance of testimony in this record is to the effect that during recent years it has been the practice of lumber dealers in the Middle West and East to discontinue the carrying of large stocks and to depend more and more upon prompt delivery from the mills. We believe, therefore, that the preponderance of the testimony in this record will support our claim that a difference of more than 200 miles in
2880 length of haul is now an important factor even in the shipment of lumber, especially during the existing period of heavy production, and keen competition between the lumber producers of the various sections of the Northwest.

But it must be admitted that the effect of this unreasonable circuity is most severe in connection with shipments of perishables. The record discloses that western Oregon is by reason of climate and other natural advantages particularly adapted to the production of fresh fruits and vegetables similar to many of those now produced in the neighboring State of California. It will be immediately recognized that the principal markets for these products are in the more populous districts of the middle west and east where competition between producing districts is extemely keen. A difference of one or two days in time of delivery has a material effect upon the quality of the product

and means a difference between success and failure in any producing district distant from market.

The testimony given by witness Butner concerning the broccoli industry of Douglas County is merely typical of other fresh fruit and vegetable industries of western Oregon. Whether this industry survives in competition with California producers depends upon whether it is to be afforded an expeditious route for shipment com-

parable with that afforded its competitors. It is not merely a
2881 matter of convenience, but it is an absolute necessity. Certainly, a difference of 213 miles in length of haul constitutes unreasonable circuity and development of one of the principal industries of the territory affected.

But this difference of 213 miles on many long hauls does not fully reflect the extent of circuity to which our shippers are now subjected. The extent to which existing routes are circuitous may be better understood by reference to the map attached to and made a part of Exhibit No. 16. Considering the hauls between eastern and western Oregon, which are of great importance in connection with the proposed line we find that the distance between Eugene and Crane via Ontario and Portland via existing routes is 681 miles. The proposed line will reduce this distance to 285 miles resulting in a saving of 396 miles between two important districts of the State of Oregon. In passenger train movement this would doubtless represent a saving of approximately 20 hours. The percentage of circuity is approximately 138 per cent. Surely it can not be argued that this is not undue circuity.

Taking as another example the distance between Medford and Ontario, which is now 759 miles, we find that the proposed line will reduce the mileage to 570 thus saving in distance 189 miles. The distance from Klamath Falls to Huntington would be reduced from 709 to 429 miles, a saving of 282 miles. The haul on broccoli from

Roseburg to Granger would be shortened under the proposed
2882 line by 307 miles on a total haul of 1,289 miles. Especially when considering the transportation of perishable products it certainly can not be seriously contended that the existing haul is not unduly circuitous.

Shippers' right to route traffic

The right of shippers to route their traffic cannot be seriously questioned. This right is freely conceded by carriers. The only question which they raise in this regard is the extent to which shippers would avail themselves of this privilege. Southern Pacific counsel take occasion to call attention to the fact that complainants have not called a large number of shipping witnesses to testify that they would route their traffic via the cross-State line. We are confident that sufficient testimony has been produced in this record to show that with a saving of more than 200 miles in distance all of the perishable traffic and a substantial portion of nonperishable traffic would be routed by the shippers themselves via the cross-State line. Shippers of perishable products were very emphatic in their statements that this

would be their practice. This is also the testimony of Witness Magladry on behalf of the Willamette Valley Lumbermen's Association.

Carriers would infer that witness Magladry was speaking only for himself but this contention is certainly not confirmed by the record.

For the sake of brevity and to avoid calling a large number of
2883 witnesses to speak for the lumber industry, Witness Magladry was selected to appear as their spokesman and to speak the voice of the majority of the members of the Willamette Valley Lumbermen's Association. The fact that Southern Pacific Company called as witnesses two or three of its dissenting members certainly does not weaken the force of the desire of the majority whom Witness Magladry represented.

Furthermore, in considering the testimony of this character and the manner in which it has been presented we suggest that the commission take into consideration the fact that all of these western Oregon shippers are solely dependent upon the Southern Pacific Company for their car supply and service. With reference to this question of routing of lumber traffic Witness Magladry, speaking for 32 members of the Willamette Valley Lumbermen's Association, representing the principal lumber manufacturers of western Oregon, testified as follows:

"Q. (By Mr. McCULLOCH.) Mr. Magladry, has this proceeding for the construction of this cross-State line been the subject of discussion among the members of the Willamette Valley Lumbermen's Association?

A. Yes, sir; very much so.

"Q. Has the question of routing of their traffic over the proposed cross-State line, if built, been the subject of discussion among the members?

A. It has, and that was the reason that they favored the line, because of the shortening of the time and of the distance.

2884 "Q. What can you say as to the routing that would be employed by the other members of the Willamette Valley Lumbermen's Association and your own company, on eastern shipments, in the event this cross-State line is built, if you know, from the discussions that have been had and the talks that you have had with other members?

"A. Well, inasmuch as the shortening of the delivery time is the vital question, and from discussions in the association and manufacturers I have talked to outside, I would say that practically all of the shipments would be routed over this cross-State line, if it were built. (Tr., p. 2431-32.)

* * * * * * *

"Q. (By Mr. McCULLOCH.) Mr. Magladry, in your judgment would opportunity to make quicker delivery of a car of lumber from the Willamette Valley, and to use the shortest possible route to get it to an eastern destination, be as important to a lumber broker as to a lumber manufacturer?

"A. Why, sure.

"Q. In your judgment would a lumber broker, in specifying or requesting a manufacturer to specify routing of a car of lumber to an eastern destination, overlook an opportunity to use a route that would save him in distance and in time of delivery three days as compared with another route that the car might move?

"A. He would not, the rates being equal." (Tr., p. 2470–71.)

We might also suggest that similar contentions with respect to shipper routing of traffic were advanced by the Southern Pacific Company in the Klamath Basin cases, where much testimony was
2885 introduced by shipper witnesses to the effect that they would continue to ship by Southern Pacific lines exclusively even though a competing carrier might be admitted into their community. It is remarkable to note the extent to which their operations have been changed since Great Northern service has been made available to them, and the extent to which their shipments are actually being routed via the Northern lines.

That the matter of time in transit is important to the lumber manufacturers of western Oregon is also clearly indicated by the testimony of witness Cornwall, called on behalf of the carriers as an expert on the lumber industry of western Oregon, from which we quote:

"Q. Do you know whether the time in transit is an important factor in enabling the mills of the Pacific coast to compete with other producing sections in those markets of the Middle West and East that buy in small quantities for immediate use.

"A. It is a factor, yes." (Tr., p. 2797.)

That the lumber producers of Oregon would use the shortest route available is likewise indicated by the testimony of witness Cornwall appearing at page 2810 of this record.

"Q. If you were manufacturing fir lumber at an interior point where you could not ship by water, do you believe, with the information and knowledge you have now, that you would use the shortest rail route to get your products to market, and the route over which you could get the quickest time in transit?

"A. It would be preferable, yes."

2886 Irrigation districts

Carriers called as a witness in their behalf, to show certain difficulties being encountered by some of the early irrigation projects of our State, Mr. Rhea Luper, State engineer. By this testimony carriers seek to imply that irrigated farming in the State of Oregon is essentially impractical and unprofitable, therefore, that further development along this line is not to be expected. Such is not the effect of the testimony given. The witness was asked concerning only the outstanding failures among our irrigation districts and did not testify at all concerning the Owyhee, the Vale, and other major irrigation projects now in successful operation or under construction; but even as to these projects concerning which witness Luper testified, it is clear that the difficulty was not one which resulted from an inherent condition of the soil, climate, or water supply but was entirely one

of poor finance. It is also evident from this testimony that this financial difficulty is being rapidly adjusted and the poorest of these districts will soon be in successful operation again. This is indicated by the following excerpt from the testimony of Mr. Luper:

Examiner ROGERS: "Mr. Luper, I want to get the right impression about this. I know some of our railroads sometimes get in a difficult financial condition due to the way their finances are handled; some of them get in financial conditions that are difficult because there
2887 was not anything there to start with where the railroad was built. Now what is the situation of these irrigation projects? Is their financial condition due to the way they were financed or because the projects themselves were improper to start with, that there was not anything there to justify an irrigation project?

"A. Well, as a general rule, the difficulty is almost entirely due to financing, too much debt, low estimates to begin with. * * *.

"Examiner ROGERS: What do you expect out of these projects if the bondholders do reach a settlement?

"A. I expect them all to continue operating, and they will be of course much more successful and productive. * * *.

"Q. (By Mr. MCCULLOCH.) Mr. Luper, if reasonable rearrangements with the bondholders of the securities of these various districts can be effected, in your judgment can settlement of farmers thereon and the development of the latent resources of those districts be successfully carried on?

"A. Yes; I think so." (Tr., pp. 2754–2756.)

Lumber traffic

Much attention is given in the brief of Southern Pacific Company to the matter of lumber traffic, in an effort to show that no substantial increase in the volume of this traffic is to be expected in the near future. Particular weight is attached to a statement by Colonel Greeley, formerly of the United States Forestry Service and now secretary-manager of the West Coast Lumbermen's Association. In the early proceeding herein there was in evidence a statement of
2888 Colonel Greeley clearly expressing his opinion as to the future development of Oregon's timber resources and the need for additional railroad construction. To properly understand the amended statement now placed in this record the commission should have before it for consideration the essential parts of the original statement from which we quote:

"I wish to say that the enlargement of the facilities for shipping Oregon timber, by rail or by water, to the central and eastern lumber markets of the United States is a matter of very great necessity.

"During the last twenty-five years the main source of softwood lumber for general construction, house building, and industrial uses in the greater part of the Mississippi Valley and the States to the east of it has been the southern pine belt in the South Atlantic and Gulf regions. The production of lumber in these regions passed its peak about 1916 and is now gradually decreasing from exhaustion of

standing timber. A survey made by the Forest Service in cooperation with lumber manufacturers in 1920, covering 5,400 sawmills in the southern pine region, showed that over 97 per cent of them will cut out their timber by 1930, with a reduction in the output of this group of mills aggregating 78 per cent. Every year that now passes witnesses the dismantling of a considerable number of these mills, and much of the capital hitherto employed in lumber manufacture in the South is now seeking new locations on the Pacific coast. An experienced lumber manufacturer of the South, after exhaustive study of the situation, made the estimate in 1920 that by 1930, if the
2889 consumption of lumber in the Eastern States does not materially decrease, it will be necessary to increase eastbound lumber shipments from the west coast to eastern markets to the extent of 11 billion board feet per year. This contemplates simply replacing the market requirements hitherto supplied from the pine forests of the South.

"The only large supply of softwood timber now remaining in the United States is on the Pacific coast, including Alaska, and in the Columbia River Basin. The lumber manufacturing industry is now moving rapidly into this region, just as thirty years ago it moved from the region of the Great Lakes into the South. The demands for western lumber to supply eastern and central markets will, in my judgment, at least double within the next ten years. With the most rapid development of transportation facilities that can be expected, I anticipate that there will still be a serious congestion of eastbound lumber shipments from this region, more or less chronic, which will affect adversely the interests of the lumber consumers of all classes in the Eastern States. As a broad question of public policy, I believe very strongly that every reasonable effort should be exerted to increase transportation facilities from the principal timber regions of the West to eastern markets. This of course includes water transportation as well as rail transportation.

"The State of Oregon contains an estimated stand of 494 billion feet of timber, or over 20 per cent of all the timber in the United States. Oregon ranks first among all the States in timber resources. In from ten to fifteen years Oregon is bound to become the
2890 leading State of the Union in lumber production. Its present rail facilities are in my judgment wholly inadequate to the production of forest products which the resources of this State ought to support. I regard it as particularly important to see the resources of Oregon for water shipments of lumber to the Atlantic coast increase and also to see additional outlets provided to the Willamette Valley and the pine regions of central Oregon for eastbound lumber shipments. The national forests of Oregon contain about 131 billion feet of standing timber. Our present yearly cut from these Government properties is 137 million feet of timber. The yearly cut from the national forests of Oregon could properly be increased to ten or twelve times the present amount, while still insuring the unimpaired perpetuation of the resource and utilizing only its current annual

growth. It would be desirable from every standpoint to bring the cut from the national forests up to that amount, to utilize old virgin timber that is now deteriorating from decay to increase public revenue for the Nation and State, and to afford an additional supply of forest products for the markets of the country. The possibility of increasing the cut from the national forests depends to a considerable degree upon the enlargement of rail facilities. To this extent, the Government has a direct interest in the matter. The predominant consideration however, in my judgment, should be the fact that the dependence of the entire country for softwood timber is rapidly shifting to the west coast, and that its existing rail facilities are inadequate to meet this growing demand."

Since the statement was made Colonel Greeley has been
2891 employed by the West Coast Lumbermen's Association, embracing lumber manfacturers throughout the Northwest, but whose interests are predominately in the fir-producing area, the greater portion of them being within the State of Washington. The amended statement changes the former one only to a limited degree in that it indicates that the demand for Oregon lumber has not come as soon as expected, for reasons which he has stated. He does not say this demand will not come within the near future. He merely calls attention to the immediate situation confronting the lumber industry and suggests that it is in the interest of existing lumber manufacturers to curtail new development.

This is a conclusion which can not be questioned. Restriction of output in any industry raises the market price of the product and benefits those engaged in it. Less competition means better prices and more profit. However, it would seem that there are others to be considered than the existing lumber manufacturers. There are vast sections of Oregon where timber is deteriorating as fast as new growth is being produced, where timber has long been mature and ready for harvest, where forest fires and the timber beetle is a constant menace; where taxation sometimes becomes unbearable. To the owners of such timber, rail outlets to market are an absolute necessity despite the more selfish interests of existing manufacturers of lumber.

2892 This is clearly shown by thetestimony of witness Cornwall called on behalf of the carriers, from which we quote:

"In your opinion will the interests of these States or of the United States, or of individuals as owners of timberlands in these States, be served to advantage by the construction in the near future of mills of substantial capacity for the manufacture of lumber?" Now you answered that, "Yes; when built to safeguard owners' timber investments or to salvage timber in jeopardy from a variety of causes." But otherwise what would be the fact?

A. Under present conditions there is ample sawmill capacity in the United States to take care of the demand, I would say. But new mills may be built where present plants are obsolete, or where timber is in jeopardy from beetle, such as it is in the Klamath section

and in certain districts, or where the increasing tax burden in the county has become unbearable to the owners." (Tr., p. 2795.)

But Colonel Greeley does not even suggest that lumber products of the northwest will not soon shift from Washington to Oregon, nor does he suggest that additional railroad facilities will not be required to market this lumber. In fact he reiterates what he has said more forcefully in his previous statement on behalf of the United States forestry department when he says:

"Furthermore, in the course of time, as lumber production shifts from Washington into Oregon additional railroad facilities may be required to market efficiently the product of the new regions of heavy production."

2893 In his answers to questions submitted by carriers Colonel Greeley clearly indicates that while there may be a sufficient production of lumber at the present time to meet all demands, financial interests of individuals may require new mill construction to liquidate timber investments and that additional facilities may be required to keep pace with the shifting location of lumber production. (Tr., p. 3368.) This evidence is entirely in accord with the present views of complainants and entirely in harmony with the showing we have made in this record. Our claims herein do not rest upon an assumption that there is to be an immediate need for additional lumber in the markets of the United States but that there is an immediate demand and necessity on the part of many companies and individuals owning timber in the State of Oregon, as well as the United States Government, to market over-ripe timber, and that within the near future the shifting of lumber production from other States to Oregon will place upon this State a demand which existing transportation facilities cannot possibly meet.

Bend lumber traffic

Counsel for Southern Pacific lines object to the inclusion in the estimates of tonnage of an item of 3,410 cars of lumber from Bend for the first year and 5,115 cars in the fifth year, suggesting the Union Pacific lines would have no means of reaching the cross-

2894 State line from Bend, and if they did use the cross-State line in preference to the Des Chutes line the use of the latter would be practically abandoned.

We cannot agree that the use of the cross-State line for eastbound lumber shipments would result in the total abandonment of the Des Chutes line. It will always be necessary for the transportation of north and south traffic. As to a means of gaining access to the cross-State line we need only point out that President Budd of the Great Northern has repeatedly asserted the willingness of his company to grant joint use over any of its lines in central Oregon. This joint use already exists north of Bend; certainly there is no reason to expect any difficulty whatever in securing it south of Bend likewise. Having, then, two alternative routes for the transportation

of lumber, it is inconceivable that the Union Pacific would not select the most economical. Neither gross revenue nor fixed charges would be affected in any degree by such a choice.

Mr. Newell's study and the empty-car movement

Much is said from pages 91 to 120, inclusive, of Southern Pacific line's brief, concerning the study made by Mr. Newell with reference to savings which might be expected to result through routing of western Oregon traffic via the cross-State line. The criticism offered in connection with the Newell study deals principally with the
2895 method followed in determining the cost of empty car haul.

The comments made with reference to this matter, particularly the discussion on page 93, concerning present and expected car movements westward, is extremely unfair and misleading. In presenting his study Mr. Newell pointed out that the actual ratio of empty car movement was 95 per cent, but that such a ratio was abnormal, for which reason he adopted and used the normal rate of 60 per cent. If he had used 95 per cent, he must, to be consistent, have used it for the present Southern Pacific movement, thereby greatly increasing the cost, and for the Union Pacific portion of the movement, thus increasing its share of the cost.

It is true that the cost of movement by the cross-State line would also be increased in similar proportion, but is a mere matter of arithmetic to show that the increase by the same proportion in costs over alternative routes must in similar proportion increase the saving by the more economical route. To express the same thought in a different way, the more empty cars to be hauled westward, the more money to be saved by taking the shortest route. Thus the substitution of 95 per cent in place of 60 per cent in calculating empty car movement, instead of wiping out the entire net earnings, as claimed by carriers, would actually make a substantial increase in such net earnings.

The brief continues making the same assertion of error as between 95 per cent and 60 per cent for subsequent years, and then
2896 assumes the full supply of empty cars to come from California.

Having first asserted that an increase of 35 per cent in empty cars would reduce net earnings of the cross-State line, they next declare that reducing empty cars 60 per cent would also reduced net earnings.

We desire to most strongly emphasize the fact that the use of the actual ratio existing during the period for which the study was made, namely 95 per cent, would greatly increase the net earnings of the cross-State line, and that the 60 per cent ratio was used only in a spirit of fairness because of the belief that a 95 per cent ratio would not continue to exist if the movement of lumber from western Oregon was permitted to flow over the shorter route.

Exhibit 129 gave full credit to the Southern Pacific claim that all empty cars for lumber eastward could and would be supplied from California, although it was pointed out that Mr. Burckhalter's state-

ments, in his exhibit, did not support his contention, that California could supply all empties needed, since they showed large empty-car movements into California, through Ogden and Tucumcari.

The Southern Pacific brief, page 97, says "the general and accepted practice being to balance car interchange at all gateways." This requirement is undoubtedly enforced on the Union Pacific at Ogden.

It would be equally easy to enforce and to meet on interchange
2897 at Crescent Lake. Any possible reduction in the economies of the use of the cross-State line and of its net earnings by bringing empty cars from California was more than fully allowed for in Exhibit 129.

Furthermore, the contention now set up by the Southern Pacific as to empty-car movement is in direct contradiction to its statements repeatedly made in former cases as to the cost of empty-car supply for western Oregon.

Mr. Dey, on the basis of admittedly incomplete analysis, attacked Mr. Newell's estimates of direct cost. He bases his objections on two grounds: First, variations from the results of his own studies of operating cost on the Southern Pacific. Second, inconsistencies with the rules adopted by the United States Railroad Administration in settlement with the owners of railroads after the war.

As regards the first, Mr. Dey's observations and testimony were confined to immediate effects upon operating expenses and variations in traffic. Mr. Newell has repeatedly stated (page 9, Exhibit 16) that he has ignored such seasonal changes as Mr. Dey dealt with, and has considered the effects in changes of traffic only in considerable volume, and over such periods of time as would be necessary to separate permanent and fundamental causes from those which are temporary in their effects.

As to the second, Mr. Dey makes comparisons with the railway
2898 administration rules, which were necessarily made to cover railroads having all extremes of traffic conditions. Now, it is perfectly obvious that the percentage of any given carrier's expenses, which is direct or variable with the traffic, is dependent, not only on the nature of the expense, but upon the volume of traffic itself. For example, let it be supposed that there are two carriers whose conditions are in all respects the same, except as to volume of traffic. Now suppose that one carrier has a certain kind of expense amounting to $500 per mile, of which it has been determined that $300, or 60 per cent, is variable with the traffic, and $200 is indirect, or independent of the traffic. The other carrier's indirect expense must also be $200, but if the volume of traffic be twice as great, its direct expense will be twice $300, or $600 per mile, which is 75 per cent of its total expense on the given account. Therefore, we may have, with entire consistency, one carrier whose direct percentage is 60, and another similarly situated, whose direct percentage is 75.

It was necessary for the railroad administration, under the necessity of prompt settlement of a multitude of claims, to adopt percentages which might be applied to all cases alike, regardless of varying

conditions, and no criticism attaches to its work under those conditions; but it is obvious that the same percentage cannot possibly be accurate for all carriers.

2899 Mr. Dey concludes (page 111 of brief) that Mr. Newell's direct costs must be reduced at least one-third. On page 28, exhibit 16, Mr. Newell shows that the total operating expenses of the O.-W. R. & N. line in 1925, are 84 per cent direct, and 16 per cent indirect. Mr. Dey would change this to 56 per cent direct and 44 per cent indirect. On page 54, Mr. Newell has Oregon Short Line expenses 81 per cent direct, and 19 per cent indirect. Mr. Dey would change this to 54 per cent direct and 46 per cent indirect. That is, he would have us believe that if these carriers, each of whom has a very moderate density of traffic, could double their traffic, they would increase their operating expenses only a little over one-half. If such a relationship between operating expenses and revenues is possible, then we should expect to find all the railroads of high traffic density having extremely low operation ratios, while all those whose density was much less, should have much higher ratios. As a matter of fact, no such difference exists. Mr. Newell presented an exhibit made up from inter-State commerce commission statistics, which shows that operating ratios decrease very slowly with an increase of traffic.

For a specific illustration, the Oregon Short Line and the Union Pacific are more nearly comparable than any other roads which we can find. They are constructed through very similar territory

2900 and handle traffic of the same nature. They handle very nearly the same number of ton-miles and passenger-miles per train-mile. The Oregon Short Line had, in 1925, a traffic density of 1,120,000 ton-miles per mile road. The Union Pacific had 2,417,000, or 2.16 times as great a density. The ratio of passenger traffic is very nearly the same. The Oregon Short Line's operating expenses were $25,200,000. According to Mr. Dey only 54 per cent were direct, so the amount of direct expenses was $13,600,000 and the indirect $11,600,000. If the traffic has been 2.16 times as dense, the direct expense should have been 2.16 times as much, or $29,400,000, and indirect $11,600,000, a total of $41,000,000.

The operating revenues for 1925 were $35,500,000, with an operating ratio of 71 per cent. If these were multiplied by 2.16, the revenues would be $76,600,000, which, with operating expenses of $41,000,000 would give an operating ratio of only 53½ per cent. The operating ratio of the Union Pacific, which actually had this density, was 65 per cent.

Repeating these calculations with Mr. Newell's ratios we have, of the total operating expenses, 81 per cent direct, which equals $20,400,000, and indirect 19 per cent, or $4,800,000. For the supposed increased density, the direct would be $20,400,000 times 2.16 equals $44,000,000, and the indirect as before $4,800,000, a total

2901 of $48,800,000. Comparing this with the increased revenue of $76,600,000 gives an operating ratio of 63.8, very nearly what the Union Pacific actually had.

This comparison may be more readily understood if the revenues are left out of consideration. The operating expenses of the Oregon Short Line were $10,350 per mile of road. 54 per cent of this would give $5,590 direct, and the remainder, $4,760, indirect. For traffic 2.16 times as great, the direct would be $12,100, and indirect $4,760, making a total of $16,860 per mile for the greater volume of traffic. The expenses of the Union Pacific, which actually had the greater volume, were $19,420 per mile. If we apply Mr. Newell's ratio of 81 per cent direct, we have $8,380 direct and $1,960 indirect for the actual performance of 1925. Multiplying the former by 2.16 gives $18,100, and adding the $1,960 indirect gives a total of $20,060. Mr. Newell's figure is 3.3 per cent over the actual, while Mr. Dey's is 14.4 per cent under. These comparisons show Mr. Dey's confusion of thought as between the effects of the minor and temporary variations on which his criticisms were based, and the broader and more permanent effects which Mr. Newell considered. This destroys all value in Mr. Dey's exhibit 108, except that it is worth noting that even after his erroneous corrections of Mr. Newell's alleged errors, he still shows a rate of return greater than is ordinarily expected from a new road in its first years.

2902 In concluding the discussion concerning the Newell estimates it is stated by carrier counsel on page 115 of Southern Pacific brief that Mr. Newell conceded that his estimates of the division of rates should be substantially increased. Such is most certainly not the fact. No such admission was made. The statement attributed to Mr. Newell at page 4099 of the record is in no respect an admission of the carrier contentions in this respect. It is merely a calculation based on a hypothetical state of facts; a study which assumed, for purposes of illustration only the correctness of certain Southern Pacific claims which the witness had already shown to be incorrect, or at least doubtful. In introducing this study Mr. Newell (p. 4097) specifically stated his purpose. He said:

"So I want first to show what the effect on my figures would be if we assume the condition described by Mr. Burckhalter as completely covering the situation; that is, that all empties would come from California, no empty burden whatever on the Union Pacific."

And again at page 4099, before presenting his results, he specifically stated that the study was made "under the supposed conditions."

Whatever merit there may be to the Southern Pacific claims as to empty car movement from California, it is certain their contentions are substantially at variance with the actual conditions that

2903 have existed in the northwest over a long period of years. It is common knowledge and an undisputed fact that car shortages in the northwest have always been most severe on the lines of Southern Pacific company in Oregon, rather than on the lines of the Oregon-Washington Railroad & Navigation company or Oregon Short Line. In fact Southern Pacific company has often experienced car shortages when no shortage existed on other lines of the northwest. In the earlier hearings in this proceeding officials of that company have

asserted that western Oregon is the hardest section of the country to get empty cars into. We are unable to accept or understand their changed contention that it is an easy place for them to deliver cars.

In conclusion, we wish to remark that it is significant that the same carriers that in this case claim Mr. Newell's figures of cost are entirely too high have in the recent grain rate case attacked the same basic figures as being too low; in still another case they accepted them and introduced them in evidence. In view of their divergent views, seemingly depending upon the necessities of the case, it would seem that there can be no serious error in the figures presented by Mr. Newell.

2904 Complainant's witnesses were representative of the interests of the State and its several communities and industries

At page 133 of Southern Pacific brief it is stated that several chambers of commerce of western Oregon cities intervened in this case and offered testimony largely through their respective paid secretaries, it being inferred that such testimony is entirely irrelevant and worthy of no consideration. We fail to see the significance of such a suggestion. It is true that several witnesses on behalf of plaintiff and interveners in its behalf were chamber of commerce secretaries who are paid to represent their respective communities and to foster their development. These secretaries are, without exception, well trained and well informed individuals who have no interests save the public interest, and they have contributed much valuable evidence to this record. But to suggest that this constitutes the scope of the testimony on behalf of interveners is absurd.

Out of a total of more than 50 witnesses called on behalf of complainant and interveners in its behalf, only five were chamber of commerce secretaries. The witnesses called were most truly representative of the State of Oregon and its various interests. We do not know how we could have selected a more truly representative group of witnesses. Included in the list were the governor of

2905 Oregon, members and employees of the public Service Commission of Oregon and of the Public Utility Commission of Idaho, county agricultural agents, representatives of the State agricultural college, representatives of the University of Oregon, the United States Department of Agriculture, the United States Forestry Department, port officials, bankers, chemists, lumbermen, stockmen, and farmers. We believe the picture presented through their testimony is truly representative not only of public sentiment throughout the State of Oregon but of the great public need for the railroad construction urged in our complaint and in the many petitions of intervention.

Counsel for Southern Pacific Company refer to the testimony of witness Gilkey, secretary of the Albany Chamber of Commerce, and certain other witnesses representing the northern part of the Willamette Valley and suggest that this testimony, more or less general in nature, is truly representative of the public interest shown in this

proceeding. We challenge such a statement as being entirely at variance with the facts. It is to be admitted that the interest of the northern section of the Willamette Valley is of a more general nature, in the interest of statewide development. But this is not the interest of western Oregon as a whole nor is it the interest of the many other sections of the state, the future development of which depends almost entirely upon the construction of the line proposed.

2906 The following excerpt from the testimony of Dr. J. F. Reddy, former mayor of Medford, may be said to be far more representative of the public interest which this record discloses.

"Q. Well, what, in your opinion, would be the effect upon the State of Oregon as a whole of the construction of the cross-State line?

"A. Well, I don't know of anything that would help the State so much as the building of a cross-country line from—I don't know any one thing that the people of this State could create so much commerce, business industry, and change the complexion of the State. The State is very backward. The other States south and north and east are growing, but Oregon doesn't seem to. It has got an awful black eye. Take the mining people, the copper mining people, while they have spent ten million dollars in southern Oregon, you can't induce any of them to come in. There's lots of the biggest copper men in America have their money invested in southern Oregon, have had it for ten, fifteen, twenty years, but it is locked up there due to lack of transportation. They assumed when they went into these various projects there that if they developed them to a certain point the Southern Pacific would furnish them transportation. Now, the Southern Pacific don't furnish anybody any transportation—never has. The history of the line will show that. If you will take and analyze what they have done since the road has been completed you will find that they never have built any feeders for anybody. They have only initiated one or two lines, and they were issued from an economic standpoint, not from a public demand, and all the present feeders, while they own some of them they didn't build them,

2907 they were built by other people, and after they were proven and shown to be good things, why, then the Southern Pacific took them over—some eight of ten railroads.

"Q. You are referring now principally to the branch lines in western Oregon?

"A. Branch lines in southern Oregon and northern California.

"Q. Well, does the Southern Pacific Company own any branch lines in southern Oregon?

"A. I didn't get that question.

"Q. Does the Southern Pacific Company own any branch lines in southern Oregon?

"A. Yes.

"Q. What line do you have in mind?

"A. In southern Oregon?

"Q. Yes.

"A. No; they don't. That is, I call everywhere south of Eugene southern Oregon. They don't own any branch lines south of Eugene.

"Q. Then there are no Southern Pacific branch lines at any point south of Eugene in western Oregon, is that your testimony?

"A. Not owned by the Southern Pacific. There's two or three feeders there, like the Pacific & Eastern and the Grants Pass, but they have nothing to do with the building of those roads; they were built in spite of them. They have been proven to be good things for the community and for the Southern Pacific Railroad.

"Q. You have stated that your community is badly bottled-up, or something to that effect.

"A. Yes.

"Q. Would you restrict your testimony in that respect to your county, or does that apply to any extent in other sections of the State of Oregon?

"A. Well, the country between Eugene and Chico, California, is a zone that has but one railroad. Now, between Eugenie and Portland they have got, I think, three railroads and a river. The country
2908 between San Francisco and Chico, California, has three railroads, competing lines, and the Sacramento River. The competition stops at Eugene on the north and stops at Chico on the south—in the south. Now, then, that country, that strip of country, I think it is about three hundred, or more than three hundred miles long, it only has one railroad, and the people who live in that particular zone pay a higher freight rate than is paid in any other part of America, if you will analyze the freight rates, and, in addition to that, that country is—the freight rates retard the development of it; it keeps people out of the country. It is practically impossible for anybody to engage in any business, any line of business, to compete with people who are engaged outside of that zone, or in other words, if you engage in anything there, farming, fruit raising, mining, almost any line of human endeavor, you have got to have a superior article, you have to produce a high grade and stand the high freight rate; and a man has got to be very selective, he has got to know his business to go into that zone and compete with the fellow who lives out of the zone." (Tr., pp. 2108–2111.)

The exceptions of the Great Northern Railway Company and other so-called northern lines are taken by certain defendants upon whom it is not proposed by the commissioner to lay any duty, burden, obligation, or liability, financial or otherwise, in connection with the recommended extension. As these exceptions deal wholly with questions of constitutional law, it is assumed that the commission will not undertake to decide the merits of such contentions but will leave them to the courts.

2909 Exceptions of Union Pacific system lines

Many of the arguments advanced by counsel for Union Pacific system lines are identical with the contentions of counsel for Southern Pacific interests. Our reply to these arguments need not be repeated.

Apparently the defendants to support the first exception (page 2) go outside of the record, citing Oregon Laws of 1909 and Carey's

History of Oregon. This is not permissible as these authorities are not in evidence.

The second exception (page 3) advances a novel proposition of law, namely, that one or two carriers by building certain lines by permission of the commission appropriate and occupy "all of the traffic producing territory" in a contiguous area of many thousands of square miles, so that the commission is debarred from permitting or requiring another line to build into that area or across it. No such vested rights attach to the certificates of convenience and necessity issued by the commission. A mere statement of the contention defeats it. But the Union Pacific system is in a peculiarly unfortunate position to argue this point, having spent many millions to build to Puget Sound and to Yakima (both already well served by other railroads) and to try to get a line into Bend from the Columbia River ahead of the Oregon Trunk Railway.

2910 The third exception (page 4) is without merit. Defendants argue that "the commission in ordering the extension of a line" into territory not already served by the carrier involved in effect "would undertake to require a carrier to extend its charter rights." Does this mean a contention that, if the commission ordered this extension built and the Union Pacific system lines obeyed the order under protest, their acts in so doing would be ultra vires? If so, is it to be understood that the Oregon-Washington Railroad & Navigation company before building the Burns branch procured its charter to be amended or extended for that purpose?

The fourth exception should be over-ruled: First, because it raises questions of constitutional law, which it is seemly for commission to leave to the courts; second, because the proposed line unquestionably is an extension within the meaning of the statute, which has supplemented the charter duties of the defendants in this respect just as it has done with respect to the duty of the defendants to abstain from charging unreasonable, unjustly discriminatory or unduly prejudicial rates, which duty defendants would owe whether their charters imposed it or not; and third, because the statute does not require as a condition precedent to a valid order for an extension like the proposed line a showing that the new line, when built, will be self-sustaining.

2911 The fifth exception (page 6) is to the proposed finding of "longer haul and greater time consumed" via existing routes and the Alturas route (not yet in use) than would be necessary via the proposed extension. That the building of the proposed extension would provide much shorter routes for a great deal of traffic both perishable and nonperishable is not denied. This exception is sought to be supported by argument based on the differences between the estimates by witnesses for complainant and defendants of the traffic that in reason might be expected to move over the proposed extension. The proposed finding has ample support in the evidence, although the evidence is conflicting upon the subject of the amount of traffic that will be available to the proposed extension, when built.

These defendants seem to assume (page 9) that the proposed extension would be "maintained" at a lower "standard of efficiency" than the routes via Alturas and Portland. Why should the Union Pacific system maintain its line from Ontario to Crescent Lake (assuming the proposed extension is built) less efficiently than its line from Ontario to Portland? The "standard of efficiency" of the Alturas route has not been demonstrated. Only the future will disclose it. In discussing this exception the defendants have avoided mentioning the Roseville route, over which most of the traffic to and from western Oregon has moved in the past and now moves. The route
2912 via the proposed line is much shorter for a great deal of the traffic now moving than the Roseville route. Whether the Alturas route will drain away most of the traffic that now goes by Roseville simply because it is somewhat shorter remains to be seen. After the Rogerson-Wells line was put into operation, much traffic continued to move between southern Idaho and California via the longer route through Ogden. But in this proceeding the commission can and doubtless will insure the movement over the proposed line of so much traffic as in its judgment the public convenience and necessity may require by attaching to its order for the extension appropriate terms and conditions. In this respect an order for extension, complainant believes, is not different from a certificate issued under paragraph (20) of section 1 of the interstate commerce act.

These defendants argue (page 12) that the construction of the proposed extension would cause "the huge investments made by the Southern Pacific to handle this same traffic" to become "wasteful and improvident capital expenditure." This argument is based on the false assumption that the proposed line, when built, will handle only traffic that now moves via Roseville and that will move via Alturas when that line will have been completed and put into operation. Furthermore, with the completion of the Alturas line and of the
2913 proposed line there will be four routes between western Oregon and eastern territories, one via Roseville, another via Alturas, another via Crescent Lake, and another via Portland. All the traffic by the first three of these routes will be handled by the Union Pacific and Southern Pacific systems. This is also true of practically all of the traffic through the Portland gateway.

Compare this situation with that in California. Between western California and eastern points the Southern Pacific has two routes (one via Ogden and the other via El Paso). The Union Pacific, the Western Pacific and the Santa Fe also form additional routes.

Between western Washington and eastern territories there are routes by the Great Northern, the Northern Pacific, the Chicago, Milwaukee, St. Paul & Pacific, and the Union Pacific system.

It does not appear that in comparison with California and Washington the construction of the proposed line will provide Oregon with more rail routes than are reasonably necessary for transcontinental traffic alone—not to mention the local development that the proposed line will foster and promote.

The sixth exception (page 59) is sought to be supported by the argument in effect that central and eastern Oregon have no productive areas "tributary to the proposed line to be served by it."
2914 But that argument begs the whole question. A railroad and an opportunity to get to markets over it from many thousands of square miles in Oregon must be provided before there can be the production in that area that would go far toward making the proposed line self-sustaining. Full-fledged production in an area to be served by a railroad to be built is not a condition precedent to the issuance of a certificate authorizing or of an order requiring its construction. Much that is urged in support of this exception could be said with equal force of the Rogerson-Wells line—a Union Pacific system project.

Furthermore, the evidence, though conflicting, does establish that a very substantial volume of traffic from the country tributary to the proposed line will be available as soon as it is open for operation. The traffic estimates of witness Teutsch are not the unsubstantial rosy visions that the defendants would make them out to be. On the contrary they are based on intimate knowledge, are conservative, and, if anything, are understated. Indeed, witness Teutsch's estimates were confirmed and corroborated by other well informed witnesses with respect to practically every item of traffic he included in his exhibit and explained in his testimony. This exception should be overruled.

The seventh exception (page 60) is utterly groundless, as it states the facts exactly. It is argued that the proposed line is "a disconnected fragment of lines originally planned" and that the
2915 dissolution of the Union Pacific-Southern Pacific merger interferred with the consummation of the construction planned. A considerable part of the construction planned originally was completed. Moreover, notwithstanding the dissolution of the merger the Southern Pacific without compulsion later closed one of the two gaps left by building the so-called Natron cut-off, but the Union Pacific has refused to close the other by building the proposed line and so virtually to complete the construction originally planned about 1906. The cross-State line was a decidedly meritorious project when it was planned for the first time and its merit has not been lost through the dissolution of the merger or other subsequent events. Its purpose was to save distance, time, and money in the transportation of traffic between western Oregon and the east and to develop the country tributary to it. Those same factors now justify its construction as they did then.

The Union Pacific system can not maintain successfully that it would have no substantial volume of traffic between western Oregon and the east for movement over the proposed line. Westbound tonnage that it handles now to Portland and there turns over to the Southern Pacific it could handle over the proposed line to Crescent

Lake and there turn it over to the Southern Pacific. The Union Pacific system's division of the joint rate certainly would not
2916 be less via Crescent Lake than via Portland and the cost of the service from Ontario to Crescent Lake would be less than from Ontario to Portland. On eastbound traffic the Union Pacific system has joint rates with the Southern Pacific via Portland. There could be no reason why joint rates on the same basis should not be made between the two systems via Crescent Lake. The Southern Pacific has joint rates on lumber via Portland to eastern points on the Great Northern and Northern Pacific. Much traffic for movement east from western Oregon through both the Portland and Crescent Lake gateways doubtless could be obtained by an intense, diligent, and persistent solicitation on the part of the Union Pacific's system. And unquestionably a very considerable volume of tonnage can be expected to be routed by Crescent Lake and Ontario by the shippers. The Union Pacific system has not yet seen fit to attempt the invasion of western Oregon, although it has invaded almost every other competitive railroad field in the Pacific northwest. When the Union Pacific system has made a convincing case, doubtless the commission will permit it to build lines into the Willamette Valley, if it asks for a certificate.

The eighth exception (page 68) is technical in the highest degree. It is a perfect example of the shadow given more importance than the substance. The Oregon-Washington Railroad & Navigation Company would have no difficulty in obtaining through negotia-
2917 tion with the Great Northern trackage rights from Bend south to the junction with the cross-State line. And the only difficulty the Oregon-Washington Railroad & Navigation Company could have in getting "access" to the eastern end of the proposed line would have to be interposed by the Oregon Short Line, which owns the Union Pacific system's rails from Ontario to Huntington. Such a difficulty is hardly to be anticipated. In this respect the Burns branch of the Oregon-Washington Railroad & Navigation Company is in exactly the same situation as the proposed line.

The ninth exception (page 69) the fortieth (page 189) may be discussed together. Both are bad. The supreme court of the United States has said (Interstate Commerce Commission v. Union Pacific Railroad Co., 222 U. S. 541, 547) that it is an "elementary rule that the substance and not the shadow, determines the validity of the exercise of the power." The facts found in the proposed report respecting the intercorporate relationships of the Union Pacific Railroad Company, the Oregon Short Line Railroad Company, and the Oregon-Washington Railroad & Navigation Company and their operation as one system under common management and control are not denied and could not be.

In Chicago, Milwaukee & St. Paul Railway Company v. Minneapolis Civic & Commerce Association, 247 U. S. 490, a judgment was affirmed of the Supreme Court of Minnesota, which
2918 affirmed an order of the Minnesota commission, by which two carriers were required to treat the tracks of a subsidiary company as if a part of their terminal system. At pages 493 and 494 of the decision it is said:

"Thus, the question presented for our decision is whether the Eastern Company, in form a corporate entity, separate and distinct from the Milwaukee and Omaha Companies, is in reality an independent carrier, exercising an independent control over the railroad to which it holds the legal title and over the conduct of its business affairs, or whether it is a mere agency or instrumentality of the two corporations, which own all of its capital stock, through which they collect an extra charge from the public for rendering by indirection a service which, as common carriers, they are legally required to render without such charge, under the conditions of operation which prevail at Minneapolis.

"With the facts thus summarized, it is difficult to conceive of a plan for the control of a jointly owned company and for the operation of a jointly owned track more complete than this one is, and it is sheer sophistry to argue that, because it is technically a separate legal entity, the Eastern Company is an independent public carrier, free in the conduct of its business from the control of the two companies which own it, and therefore free to impose separate carrying charges upon the public."

And at page 501:

"In such a case the courts will not permit themselves to be blinded or deceived by mere forms of law, but, regardless of fictions, will deal with the substance of the transaction involved as if the corporate agency did not exist and as the justice of the case may require.
2919 "Satisfied as we are by the evidence that the Eastern Company is a completely controlled agency of the two companies which own its capital stock, we agree with the Supreme Court of Minnesota that the fact that the legal title to what are obviously terminal or spur delivery tracks is in the Eastern Company should not be permitted to become the warrant for permitting a charge upon shippers greater than they would be required to pay if that title were in the owning companies. The order of the commission, affirmed by the Supreme Court of Minnesota, so far from being arbitrary, is plainly just; and clearly it does not deprive the plaintiffs in error of their property without compensation or without due process of law, by requiring, as it does, that for rate-making purposes the Milwaukee and Omaha Companies shall extend to shippers over their tracks, the legal title to which is in the Eastern Company, equality of treatment with that which they give to shippers over their separately owned tracks, where similiar service is rendered."

Now for rate-making purposes the Union Pacific Railroad Company, the Oregon Short Line Railroad Company, and the Oregon-

Washington Railroad & Navigation Company are a single line by their own voluntary action. The Union Pacific Railroad Company has it in its power to absorb the other two lines and to cause them as corporate entities to be dissolved and to operate the existing lines from Council Bluffs to Portland. For all practical purposes the Union Pacific Railroad Company does own and operate a line
2920 from Council Bluffs to Portland. Should these three carriers be considered a single line for as important a purpose as rate-making and not for the purposes expressed in sub-paragraph (21) of section 1 of the interstate commerce act? These two exceptions are a sort of razzle dazzle that finds on support in the law.

In Southern Pacific Terminal Co. v. Interstate Commerce Commission, 219 U. S. 498, it was held that a corporation created to carry on, conformably to a municipal ordinance and a confirmatory statute intended to secure public shipping facilities, a wharfage business at a seaport, and to furnish terminal facilities for a railway and steamship system of which it formed a part and by which it was controlled through a holding company, was a common carrier, and as such was subject to the jurisdiction of the Interstate Commerce Commission acting in the exercise of its authority, under the act to regulate commerce, to prohibit undue preferences. At page 521 of the decision it was said:

"Another and important fact is the control of the properties by the Southern Pacific Company through stock ownership. There is a separation of the companies if we regard only their charters; there is a union of them if we regard their control and operation through the Southern Pacific Company. This control and operation are the important facts to shippers. It is of no consequence that by
2921 mere charter declaration the terminal company is a wharfage company, or the Southern Pacific a holding company. Verbal declarations can not alter the facts. The control and operation of the Southern Pacific Company of the railroads and the terminal company have united them into a system of which all are necessary parts, the terminal company as well as the railroad companies."

At Page 523:

"In opposition to these views appellants urge the legal individuality of the different railroads and the terminal company, and cite cases which establish, it is contended, that stock ownership simply or through a holding company does not identify them. We are not concerned to combat the proposition. The record does not present a case of stock ownership merely, or of a holding company which was content to hold. It presents a case, as we have already said, of one actively managing and uniting the railroads and the terminal company into an organized system. And it is with the system that the law must deal, not with its elements. Such elements may, indeed, be regarded from some standpoints as legal entities; may have, in a sense, separate corporate operation; but they are directed by the same paramount and combining power and made single by it. In all transactions it is treated as single."

Where the corporate form of organization is adopted in an endeavor to evade a statute or to modify its intent, courts will disregard
2922 the corporate concept and look at the substance and reality of the matter. United States v. Lehigh Valley Railroad Co., 220 U. S. 257; Northern Securities Co. v. United States, 193 U. S. 197.

In Stockton v. Central Railroad Co., 50 N. J. Eq. 52, 24 Atl. 964, it was said (pages 972 and 973):

"In the face of such a situation it is idle to say that the Port Reading Railroad Company is not in all things, save in its intangible and unsubstantial corporate entity, the Philadelphia & Reading Railroad Company. It is only necessary to state these particulars to satisfy the mind of the justice of this conclusion. 'The statement,' says Mr. Morawetz in his work on corporations (section 227), 'that a corporation is an artificial entity, apart from its members, is merely a description, in figurative language, of a corporation viewed as a collective body. A corporation is really an association of persons, and no judicial dictum or legislative enactment can alter this fact.' 'It is a certain rule,' said Lord Mansfield in Johnson v. Smith, 2 Burrows, 962, 'that a fiction of law shall never be contradicted so as to defeat the end for which it was invented, but for every other purpose it may be contradicted.' It follows from the conclusion reached that the intervention of the Port Reading Company as nominal lessee is but a device to disguise the real nature of the transaction. It is demonstrated as clearly as words could state it that the object of the transaction was to place the Central Railroad within the Philadelphia & Reading Railroad system. The Central's reliance was not
2923 upon the small, unfinished road, with a comparatively petty capital, and little or no valuable assets, but upon the Philadelphia & Reading Railroad Company, that estimated its assests at $200,000,000. It is sticking in the bark to say that in this transaction the Philadelphia & Reading Railroad Company is not the real lessee, and that the guaranty executed by it is not the real lease. The misnomer of papers, and the use of a nominal lessee, does not change the substance of the transaction with which this court deals. The situation here may be summed up in the words of Vice Chancellor Kindersley in Attorney General v. Great Northern Ry. Co., 1 Drew. & S. 157 (6 Jur., N. S., 1006, 29 Law J. ch. 794): 'A more flimsy device, when the particulars are once known, it is impossible to imagine. It may succeed for a time in baffling persons who may have an interest in preventing its being done, and has succeeded; but it was a mere crafty contrivance to evade the requisition of the law on the subject of joint-stock companies.' It must not be thought that courts are powerless to strip off disguises to thwart the purposes of the law. Whenever such disguises in fact appear, they can readily be disrobed. The difficulty is in showing the disguises, not in penetrating them when they appear. Attorney General v. Great Northern Ry Co., supra; Pennsylvania R. Co. v. Com. (Pa. Sup.), 7 Atl. Rep. 368; People v. Chicago Gas Trust Co., 130 Ill. 268, 22 N. E. Rep. 798; People v.

North River Sugar Refining Co., 121 N. Y. 582, 24 N. E. Rep. 834; State v. Standard Oil Co. (Ohio), 30 N. E. Rep. 279."

2924 In State v. Chicago & Northwestern Railway Co., 158 N. W. (Minn.) 627, the Supreme Court of Minnesota affirmed a judgment setting aside an order of the railroad and warehouse commission, in so far as it fixed a joint rate between the Chicago & North Western Railway Company and the Chicago, St. Paul, Minneapolis & Omaha Railway Company. Many decisions of Federal and State courts were cited in the opinion, which concludes (pages 629 and 630):

"It was the fixed purpose of the Northwestern when Vanderbilt with the concurrence of its president arranged for the acquisition of a majority of the Omaha stock to bring the two roads under one control and operation. It meditated no wrong and did none. Business sagacity prompted the purchase and no public policy was offended. It was beneficial to the companies and to the public. The present operation is not the result of a cooperation of two distinct companies having separate interests. The directing control of the two roads is one and single. There is a single and paramount control and domination of both properties and a unity of operation as a continuous line. Whatever the form this is the reality."

2925 In Buie v. Chicago, Rock Island & Pacific Railway Co., 65 S. W. (Tex.) 27, the supreme court of that state said (page 31):

"By organizing the Chicago, Rock Island & Texas Railway Company, and through it operating the railroad in Texas, the Chicago, Rock Island & Pacific Railway Company was doing its business in Texas by and through those persons who purported to represent the subcorporation, and the principal corporation was legally in Texas through its said agents, and was liable to suits in the courts of this state by service of process upon the agents which represented it in that business. * * * The authorities cited fully sustain the proposition that, when one corporation makes use of another as its instrument through which to perform its business, the principal corporation is really represented by the agents of the subcorporation, and its liability is just the same as if the principal corporation had done the business in its own name."

The foregoing cases are sufficient to show that these two exceptions are wholly lacking in merit.

The remaining exceptions of the Union Pacific system lines cover topics that have been discussed at length elsewhere herein in reply to the exceptions of the Southern Pacific Company.

2926 In conclusion, we submit that the carrier exceptions to the report of Commissioner McManamy are without merit, and the report should be adopted.

Respectfully submitted.

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For Public Utilities Commission of Idaho, Intervener.
ROBERT M. DUNCAN,
Attorney for Malheur County, Grant County, and Harney County, Oregon; Ontario Commercial Club and Burns Chamber of Commerce, Interveners.
JAMES T. CHINNOCK,
Attorney for Grants Pass Chamber of Commerce, Intervener.
WM. P. ELLIS,
Attorney for Portland Chamber of Commerce, Intervener.

Salem, Oregon, May 21, 1929.

2927 *Defendant's Exhibit E*

Interstate Commerce Commission, Washington

I, George B. McGinty, secretary of the Interstate Commerce Commission, do hereby certify that the attached is true and correct extract from page 3 of the carriers' protest filed June 6, 1923, in valuation docket No. 329, tentative valuation report on the properties of Oregon-Washington Railroad & Navigation Company, Des Chutes Railroad Company, the original of which is now on file and of record in the office of this commission.

In witness whereof I have hereunto set my hand and affixed the seal of said commission this 4th day of December, A. D. 1930.

GEORGE B. MCGINTY,
[SEAL.] *Secretary of the Interstate Commerce Commission.*

U. S. district court, District of Oregon. Filed, Dec. 9, 1930, G. H. Marsh, Clerk.

2928 4. The lines of the Union Pacific Railroad Company, Oregon Short Line Railroad Company, Oregon-Washington Railroad & Navigation Company, Los Angeles & Salt Lake Railroad Company, and The St. Joseph & Grand Island Railway Company, together with the interest of those companies in affiliated carrier properties, constitute the Union Pacific system. This system of railroad, aggregating about 9,600 miles, is in common ownership and operated as an entity, and is such a system as under section 15a of the interstate commerce act must be considered as an entity.

2929 In United States District Court for the District of Oregon

(In Equity No. E-9113)

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, PETITIONER

v.

UNITED STATES OF AMERICA, DEFENDANT, AND INTERSTATE COMMERCE COMMISSION, Public Utilities Commissioner of Oregon (Successor of Public Service Commission of Oregon), and Public Utilities Commission of the State of Idaho, intervening defendants

Order granting further extension of time to file record on appeal

Filed Jan. 13, 1932

Good cause shown, and upon the stipulation of counsel for all parties of record,

It is ordered, that the intervening defendants herein be, and they are hereby, allowed additional time to and including March 31, 1932, in which to file the record on appeal in this cause in the Supreme Court of the United States.

JOHN H. MCNARY,
United States District Judge.

January 8th, 1932.

Consented to:

J. STANLEY PAYNE,
Solicitor for Interstate Commerce Commission.

2930 I. H. VAN WINKLE,
Solicitor for Public Utilities Commissioner of Oregon (successor of Public Utilities Commission of Oregon).

J. M. THOMPSON,
Solicitor for Public Utilities Commission of the State of Idaho.

ARTHUR C. SPENCER,
Solicitor for Oregon-Washington Railroad & Navigation Company.

ALFRED A. HAMPSON,
Solicitor for Southern Pacific Company.

CHARLES A. HART,
Solicitor for Great Northern Railway Company.

CHARLES A. HART,
Solicitor for Oregon Trunk Railway.

CHARLES A. HART,
Solicitor for Oregon Electric Railway Company.

2931 [File endorsement omitted.]

2932 In Supreme Court of the United States

Statement of points intended to be relied upon and stipulation of parts of record to be printed

Filed Mar. 25, 1932

Come now Interstate Commerce Commission, Public Utilities Commissioner of Oregon (successor of Public Service Commission of Oregon), and Public Utilities Commission of the State of Idaho, appellants in the above-entitled case, and state that the points upon which they intend to rely in this court in this case are as follows:

1. Section 1 (21) of the interstate commerce act, in unambiguous terms, empowers the commission to authorize or require by order any carrier by railroad subject to the act to extend its line or lines, subject to the two limitations there specified.

2. The commission's order, requiring the Union Pacific system to extend its lines, upon a showing and finding, responsive to the applicable statutory provision, that the extension is reasonably required in the interest of public convenience and necessity, that the expense involved will not impair the carrier's ability to perform its duty to the public, and that the facts otherwise warrant the construction, is within the power conferred upon the commission by section 1 (21) of the act.

2933 3. The commission correctly found and held that this provision of the statute, in plain language, empowers it to authorize or require a carrier subject to the act to extend its line or lines, and that, there being no ambiguity in the language, there is no room for construction.

4. When the provision in question is read in the light of the act as a whole, and especially in connection with other provisions added by the transportation act of 1920, which have for their purpose the building up of an adequate railway system for the whole of the United States, the meaning conveyed by the words used in section 1 (21) is confirmed.

5. The legislative history of the 1920 amendments also confirm the meaning of the words used in section 1 (21).

6. The meaning of the words used in this provision is also confirmed by those used in paragraphs 18 and 22 of section 1 and in paragraph 13 (a) of section 6.

7. Paragraphs 18, 19, and 20 of section 1, prohibiting the construction, abandonment, or extension of lines, or acquisition or operation of any line or extension thereof, unless and until there shall first have been obtained from the commission a certificate that the present or future public convenience and necessity require or will require the construction or operation, or construction and operation, of such additional or extended line of railroad, or permit of such abandonment, confer a negative or restraining power upon the commission, and prevent voluntary action by carriers except where such action is found by the commission to be in the interest of public convenience and

necessity. Paragraph 21 contemplates construction of extensions of existing lines of railroad demanded by public convenience and necessity which the carriers are unwilling to construct voluntarily,
2934 and confers the affirmative authority upon the commission, when it makes the requisite findings, to require such extensions.

8. There is no foundation in the language of the statute for a limitation upon the power conferred to comparatively short extensions in territory already served by the carrier involved. If such had been the intention it is to be presumed that apt language expressive thereof would have been used. But no such limitation was enacted. The language that was used contains definite and sufficient limitations, the first being that the extension "is reasonably required in the interest of public convenience and necessity," and when the true meaning and binding force of this clause is borne in mind in conjunction with the fact that this is the criterion and only standard of action provided in many other important and remedial provisions of the interstate commerce act, the real limitation becomes apparent. The second limitation is that the expense involved will not impair the ability of the carrier to perform its duty to the public and this, too, operates as a very definite limitation. These were the only limitations Congress imposed. To read additional limitations into the act is to amend it by judicial action.

9. Section 1 (21) is not susceptible of the construction that it is "limited to such extensions as are reasonably necessary to reach communities and industries in the territory which the carrier has professed to serve or according to the undertaking which it has expressly or impliedly assumed," as held by the court below.

10. The language of the statute, as well as the commission's recommendation in pursuance of which the statute was enacted, show that the intention was to require a carrier to build into and
2935 develop undeveloped territory, as well as to build short branch or spur lines or spur tracks in developed territory, if the building is reasonably required in the interest of public convenience and necessity and the expense involved will not impair the carrier's ability to perform its duty to the public.

11. To construe the provision in question as the court below construed it, whereby it would be limited to extensions in territory which the carrier has professed to serve or according to the undertaking which it has expressly or impliedly assumed, is to emasculate the provision, for that construction would limit the provision to extensions which the carrier is willing to construct voluntarily, and if the carrier were unwilling to build an extension into a given territory it could profess not to serve that territory, whereas section 1 (21) plainly contemplates the construction of extensions which the carrier is required to build against its will. Other provisions, especially paragraphs 18, 19, and 20 of section 1, fully cover voluntary constructions, and if paragraph 21 be construed as applicable only where the carrier professes to serve the communities, industries, or territory to be reached by the extension, then paragraph 21 stands without force or application.

12. The reasoning of the court below to the effect that a carrier may not be "required to devote its property to a service which it has never professed to render and to a service entirely beyond the scope of the undertaking which it has expressly or impliedly assumed," is erroneous as a matter of law, contrary to numerous provisions of the interstate commerce act, and contrary to many decisions of the Supreme Court of the United States.

2936 13. The court below erred in holding that section 1 (21) "is susceptible to two constructions, by one of which grave and doubtful constitutional questions arise and by the other of which such questions are avoided," for the reason that inasmuch as no ambiguity exists in the language there is no room for construction.

14. The provision of the interstate commerce act for compulsory extensions of lines is a regulation of commerce within the power of Congress.

15. As applied in the case at bar, section 1 (21) contravenes no constitutional limitation upon the power of Congress to regulate interstate commerce.

16. The court below erred in holding that the construction placed by the commission on section 1 (21) is neither necessary nor permissible, for the reason that the commission properly applied the provision according to its plain terms, properly held that it is "bound by the words employed" and is "not at liberty to conjure up conditions to raise doubts in order that resort may be had to construction," and properly held that there is no room for construction of the provision because no ambiguity exists therein.

17. The evidence before the commission fully established that the construction of the ordered extension would be in the interest of public convenience and necessity.

18. The evidence before the commission fully established that the expense involved in building the extension would not impair the ability of the carrier to perform its duty to the public.

2937 19. The order in question does not exceed the commission's authority and is not based upon error of law, a full hearing was granted, the findings which support the order are fully justified by the evidence, and the order is valid in every respect.

And the appellants further state that the parts of the record, as filed in this court, which need be printed by the clerk for hearing of the case, are the parts set out in a stipulation of counsel for all parties, filed herewith.

J. STANLEY PAYNE,
Solicitor for Interstate Commerce Commission.
J. H. VAN WINKLE,
Solicitor for Public Utilities Commissioner of Oregon (successor of Public Service Commission of Oregon).
J. M. THOMPSON,
Solicitor for Public Utilities Commission of the State of Idaho.

Service of the above statement is hereby accepted January 7th, 1932.

ARTHUR C. SPENCER,
Solicitor for Oregon-Washington Railroad & Navigation Company.

ALFRED A. HAMPSON,
Solicitor for Southern Pacific Company.
CHARLES A. HART,
Solicitor for Great Northern Railway Company.
CHARLES A. HART,
Solicitor for Oregon Trunk Railway.
CHARLES A. HART,
Solicitor for Oregon Electric Railway Company.

2938 *Stipulation as to printing record and exhibits*

It is stipulated by the parties hereto that the following shall govern the printing of the record of the District Court in the appeal in the above-entitled cause.

Omit from printing the following:

Petitioner's Exhibit No. 1 before the District Court, stipulation regarding introduction in evidence before the District Court of certified copies of documents on file with Interstate Commerce Commission.

Petitioner's Exhibit No. 4 before the District Court, except that part consisting of joint answer of Des Chutes Railroad Company, Oregon Short Line Railroad Company, Oregon-Washington Railroad & Navigation Company, and Union Pacific Railroad Company to complaint in docket No. 19680 before the Interstate Commerce Commission.

Petitioner's Exhibit No. 6 before the District Court, certified copy of brief submitted to Interstate Commerce Commission by complainant in docket No. 19680, Oregon Public Service Commission *v.* Central Pacific Ry. Co. et al.

2939 Petitioner's Exhibit No. 7 before the district court, certified copy of report and order of Interstate Commerce Commission entered December 3, 1930, in docket No. 19680 (same being Exhibit B to the petition).

Petitioner's Exhibit No. 9 before the district court, certified copy of brief submitted to Interstate Commerce Commission by complainant in docket No. 14392, Public Service Commission of Oregon v. Central Pacific Ry. Co., et al.

The following exhibits introduced before the Interstate Commerce Commission in docket No. 19680, Oregon Public Service Commission v. Central Pacific Ry. Co., et al. (which were part of petitioner's Exhibit No. 3 before the district court):

I. C. C. Exhibits Nos.

3	29	43	74	102	116	125
4	30	44	94	103	117	126
13	31	45	95	109	118	127
15	32	46	96	110	119	128
16	37	47	97	111	120	129
16a	39	48	98	112	121	131
17	40	49	99	113	122	132
20	41	52	100	114	123	133
21	42	73	101	115	124	134

With the above exceptions the entire record now on file shall be printed in the customary manner.

Of the exhibits so omitted from printing, counsel for appellants, shall, before the cause comes up for argument in the Supreme Court, furnish to the clerk 10 copies of the following exhibits introduced before the Interstate Commerce Commission in said docket
2940 No. 19680, and constituting a part of petitioner's Exhibit No. 3 before the district court, which shall be suitably bound for submission to the justices of the court, to wit, I. C. C. Exhibits Nos.—

3	32	52	110	115	120	125
13	37	73	111	116	121	126
15	39	74	112	117	122	127
16	40	99	113	118	123	128
16a	47	109	114	119	124	129
17						

It is further stipulated and agreed that counsel for any of the parties may in his brief or argument refer to any exhibit or portion thereof introduced in evidence before the Interstate Commerce Commission in said docket No. 19680, or in the district court that is not included in the printed transcript of the record in this court and not included in the aforesaid list of exhibits of which 10 copies shall be provided for the use of the justices.

It is further agreed that this stipulation be printed by the clerk as part of the record on appeal.

J. STANLEY PAYNE,
Solicitor for Interstate Commerce Commission.
J. H. VAN WINKLE,
Solicitor for Public Utilities Commissioner of Oregon (successor of Public Service Commission).
J. M. THOMPSON,
Solicitor for Public Utilities Commission of the State of Idaho.
ARTHUR C. SPENCER,
Solicitor for Oregon-Washington Railroad & Navigation Company.
ALFRED A. HAMPSON,
Solicitor for Southern Pacific Company.
CHARLES A. HART,
Solicitor for Great Northern Ry. Co.
CHARLES A. HART,
Solicitor for Oregon Trunk Railway.
CHARLES A. HART,
Solicitor for Oregon Electric Ry. Co.

2941 [File indorsement omitted.]
Enter J. Stanley Payne.

File No. 36634, Oregon, D. C. U. S., term No. 23

INTERSTATE COMMERCE COMMISSION, PUBLIC UTILITIES COMMISSIONER OF OREGON, ETC., AND PUBLIC UTILITIES COMMISSION OF THE STATE OF IDAHO, APPELLANTS

VS.

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, SOUTHERN PACIFIC COMPANY, GREAT NORTHERN RAILWAY COMPANY, ET AL.

Filed March 23, 1932

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